



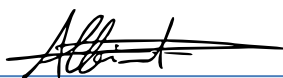
SuperDove Visual Inspection Report

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Clement Albinet
ESA Technical Officer

AMENDMENT RECORD SHEET

The Amendment Record Sheet below records the history and issue status of this document.

ISSUE	DATE	REASON
0.1	02 November 2020	Draft issue for ESA review – reference document to EDAP.REP.041 TN on Quality Assessment for SuperDove
1.0	27 January 2022	First issue.

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INTRODUCTION

This memo provides the extensive visual inspection results of (and is provided as a reference document to) the EDAP SuperDove assessment [RD-1].

Reference Documents

1.

The following is a list of reference documents with a direct bearing on the content of this proposal. Where referenced in the text, these are identified as [RD-n], where 'n' is the number in the list below:

1.1

RD-1. EDAP.REP.041 Quality Assessment for SuperDove, v0.1, 02 November 2020.

Glossary

1.2

The following acronyms and abbreviations have been used in this Memo.

GSD	Ground Sampling Distance
MTF	Modulation Transfer Function
NIIRS	National Imagery Interpretability Rating Scale
PHR	Pleiades High Resolution
POI	Point Of Interest

EDAP SUPERDOVE VISUAL INSPECTION

Scope

The visual inspection analysis of SuperDove images is based on an objects database. The object database relies on Points Of Interest (**POI**) selected for their characteristics and include both manmade and natural objects.

2.

2.1

SuperDove has an approximate Ground Sampling Distance (**GSD**) of 3.7 m, with an approximate frame size of 32.5 x 19.6 km (with some variability by satellite altitude). Five bands are available within the test product dataset, in the following wavelengths:

Blue: 457.5 - 522.5 nm

Green: 542. - 577.5

Red: 650 - 680

Red-Edge: 697.5 - 712.5

NIR: 855 - 875

For this visual inspection, the OrthoTile products (Level 3A) were used.

Within the delivered dataset [RD-1], data observed over Salon de Provence (France) and dated 04 April 2020 has been selected, "3289167_3159222_2020-04-04_2259_BGREN_Analytic.tif" (PSD.6 of the test product dataset).

Figure 2-1 shows the distribution of the POI over the SuperDove Blue Band 1 image; 22 POIs in total have been selected.

Pleiades data have been chosen as a comparison with the SuperDove Blue, Green and Red Bands, with the following comparable wavelengths:

Blue: 430 – 550 nm

Green: 490 – 610 nm

Red: 600 – 720 nm

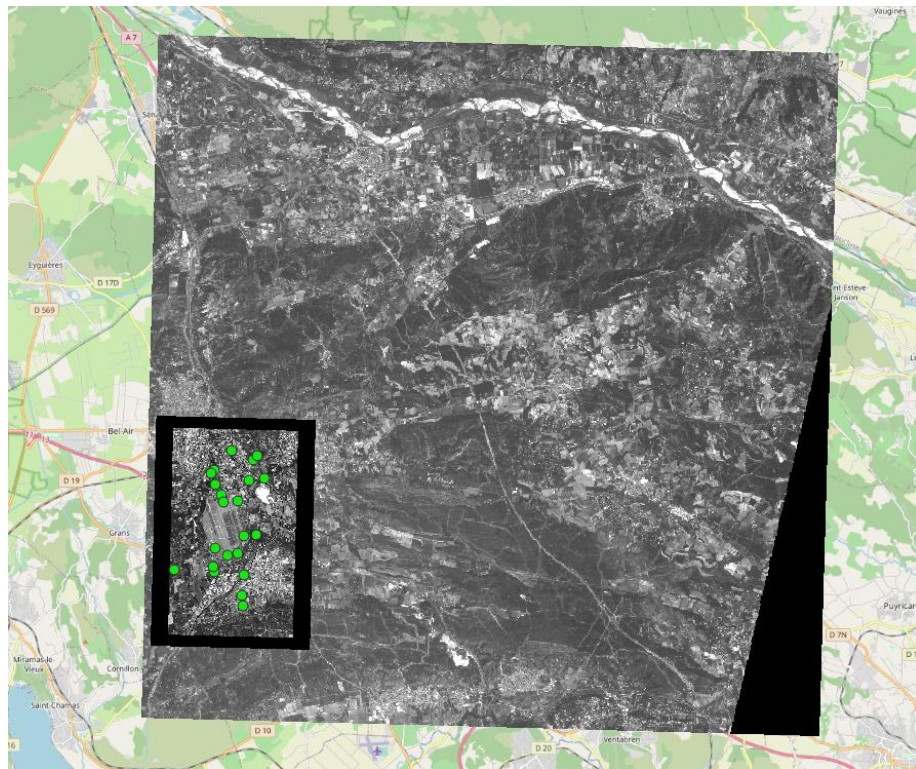


Figure 2-1: Points of Interest over SuperDove Blue Band 1 Image (large image) and PHR Blue Band 1 image (inset image).

2.2

Method

The method consists of clipping input images (all SuperDove channels) within a 400 x 400 pixel window centred on each POI. The resolution of images displayed in this document is the full resolution. From the radiometric point of view, there is no post processing applied e.g. equalization, stretching, but the scaling is optimised to provide better inspection.

The extraction of image data is performed together with the computation of a histogram associated with the POI image data (but has not been rescaled).

This procedure is also repeated with Pleiades High Resolution (**PHR**) data. The input PHR data is Multispectral data (1.0 m) rescaled to 3.125 m, with the following details:

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The National Imagery Interpretability Rating Scale (NIIRS)¹ is a scale used for rating the quality of imagery acquired from various types of imaging systems. The NIIRS defines different levels of image quality/interpretability based on the types of tasks an analyst can perform with images of a given NIIRS rating. The NIIRS consists of 10 levels, from 0 (worst quality) to 9 (best quality).

The image quality of Pleiades MS, PAN data is extremely good and MSS / PAN belongs to NIIRS class 6 and class 4, respectively.

Results Summary

2.3

The presence of noise in SuperDove blue band 1 imagery is likely due to atmospheric contamination.

One can note the degradation of the resolution in SuperDove NIR band 5 (due to the quantum efficiency law).

There is a sense that the comparison with PHR is not strictly fair, given the superior image quality compared with SuperDove for all POI. In part, this can be ascribed to SuperDove rescaling based on the histogram data. Over many of the POI, the SuperDove histogram is skewed, therefore rescaling around the mean results in an image that is not either saturated in parts or too dark. Without rescaling, SuperDove images generated using this process are usually too dark with the exception of NIR band 5.

Particular comparison examples are given in Table 2-1.

Table 2-1: Examples of image comparison between SuperDove and PHR

Description	id	SuperDove	Pleiades
Modulation Transfer Function (MTF), blue band	1	Section 2.5.1.1 Blurry and saturated in the white part of the target	Section 2.5.6.1 Detailed image and the target is clearly resolved
MTF target, red band <i>Rescaled more leniently to try to avoid saturation over the target</i>	1	Section 2.5.3.1 This is achieved but the image is now overly dark	Section 2.5.8.1 A darker image for PHR also but the target is still clear
Building, green band	16	Section 2.5.2.16 Saturation seen in a few regions, details on road not seen clearly	Section 2.5.7.16 Good contrast, features seen in roads, building at right saturated

¹detail about the NIIRS classification <http://www.fas.org/irp/imint/niirs.htm>

Point of Interest Definition

Table 2-2 lists the POIs used in this assessment; a short description of each is given.

Table 2-2: POI over the Salon scene

2.4

wkgt_geom (UTM 31)	id	Description
Point (671090.3105554151115939 4830278.58671295549720526)	1	Modulation Transfer Function target
Point (671364.24309313111007214 4833044.0252351425588131)	2	Motor way / sharp transition (45° NE)
Point (668580.81736886233557016 4828965.45189037173986435)	3	Forest
Point (670056.62237295764498413 4828905.08180973120033741)	4	Roundabout / parking lot
Point (669985.90922565956134349 4832120.72269264236092567)	5	Elevated tree
Point (669956.03863696497865021 4832655.53592716064304113)	6	Motor way / roundabout / orientations
Point (670564.24590074480511248 4833363.40447467099875212)	7	The dam
Point (669836.88448120269458741 4832528.00618595350533724)	8	Big building (shadow)
Point (670518.95015854423400015 4829513.56928175128996372)	9	Landing track - 34
Point (670249.72702971810940653 4831735.0312919020652771)	10	Floor Painting
Point (670900.38168655894696712 4829617.21182315889745951)	11	Crop fields / sparse
Point (671548.0352310094749555 4830292.1131860688328743)	12	Broadleaved woodland
Point (671099.93821095407474786 4828090.14610077627003193)	13	Crop fields
Point (671156.44116920174565166 4828825.77096180152148008)	14	Bridge and water
Point (671120.4438803291413933 4827691.31545618735253811)	15	Crop fields
Point (670328.31568091106601059 4831489.30539688002318144)	16	Building / EA 15
Point (671516.86161747551523149 4833207.41657157335430384)	17	Greenhouse
Point (669996.87127304612658918 4829099.09009433817118406)	18	Parking lot
Point (670062.87681329366751015 4829781.35287734866142273)	19	Plane parking
Point (670860.46870227111503482 4831527.10888031311333179)	20	Plane hangar

wkgt_geom (UTM 31)	id	Description
Point (671802.47347140731289983 4832385.40385554917156696)	21	Small crop fields
Point (671246.59432400949299335 4832300.03732818737626076)	22	Urban city

Detailed Results

The following sections provide the histogram and image extraction for each POI for each band within the SuperDove product:

2.5

- Blue band 1: Section 2.5.1
- Green band 2: Section 2.5.2
- Red band 3: Section 2.5.3
- Red Edge band 4: Section 2.5.4
- Near InfraRed band 5: Section 2.5.5

The corresponding POI within the Pleiades product for the first three SuperDove bands are shown in:

- Blue: Section 2.5.6
- Green: Section 2.5.7
- Red: Section 2.5.8

Any important notes and observations are included beneath the image extraction figures.

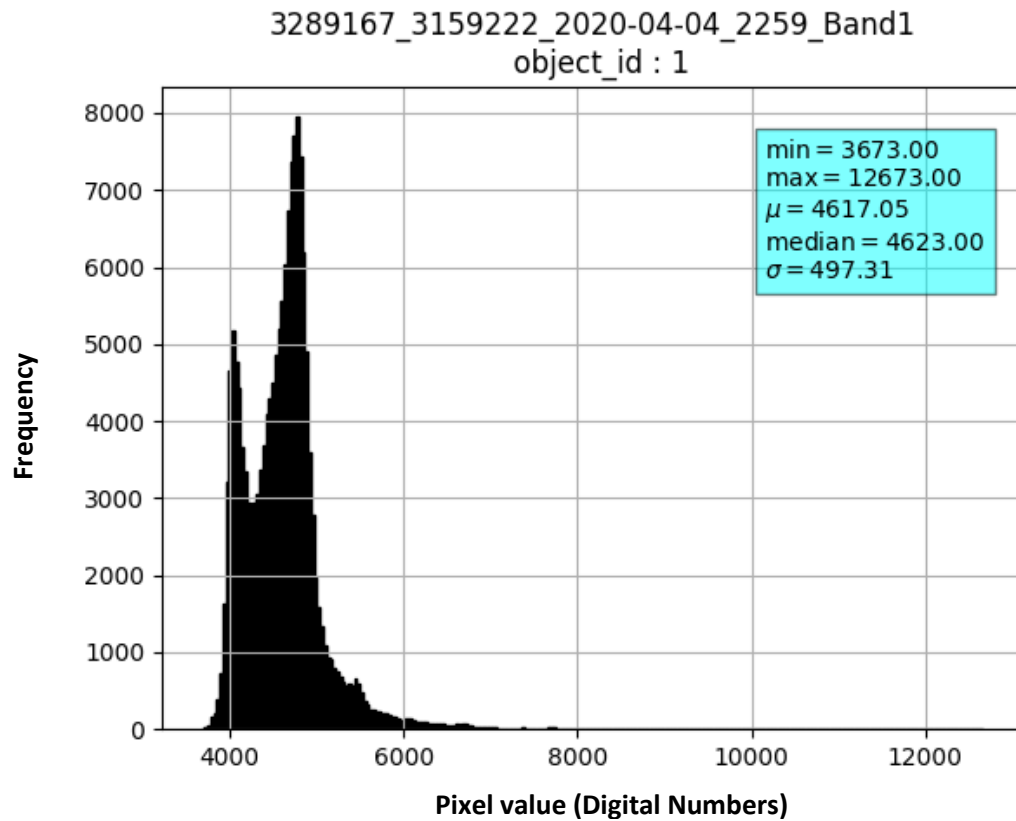
Images were rescaled in order to provide a better viewing comparison. All bands are rescaled to within 3 sigma of the mean, apart from Red band 3, which is scaled to within 4 sigma in order to provide a contrast to those POIs that contain saturated pixels (MTF targets particularly).

SuperDove – Blue Band (Band 1)

Id 01

2.5.1

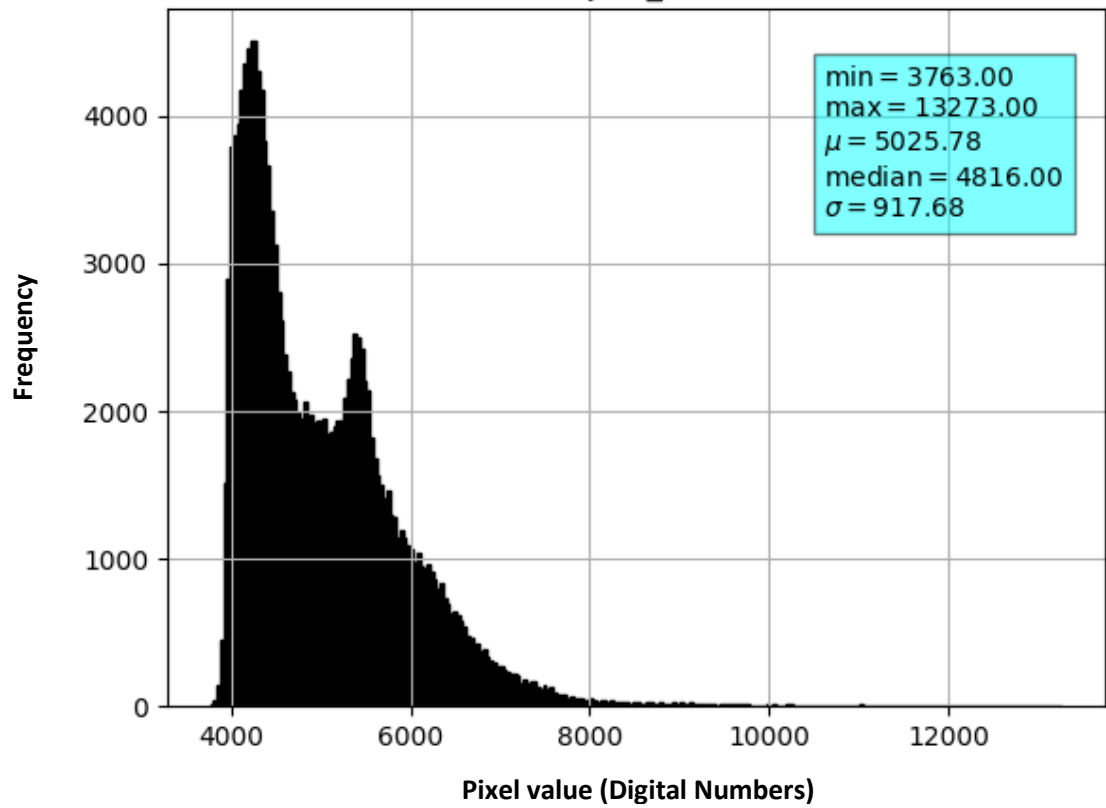
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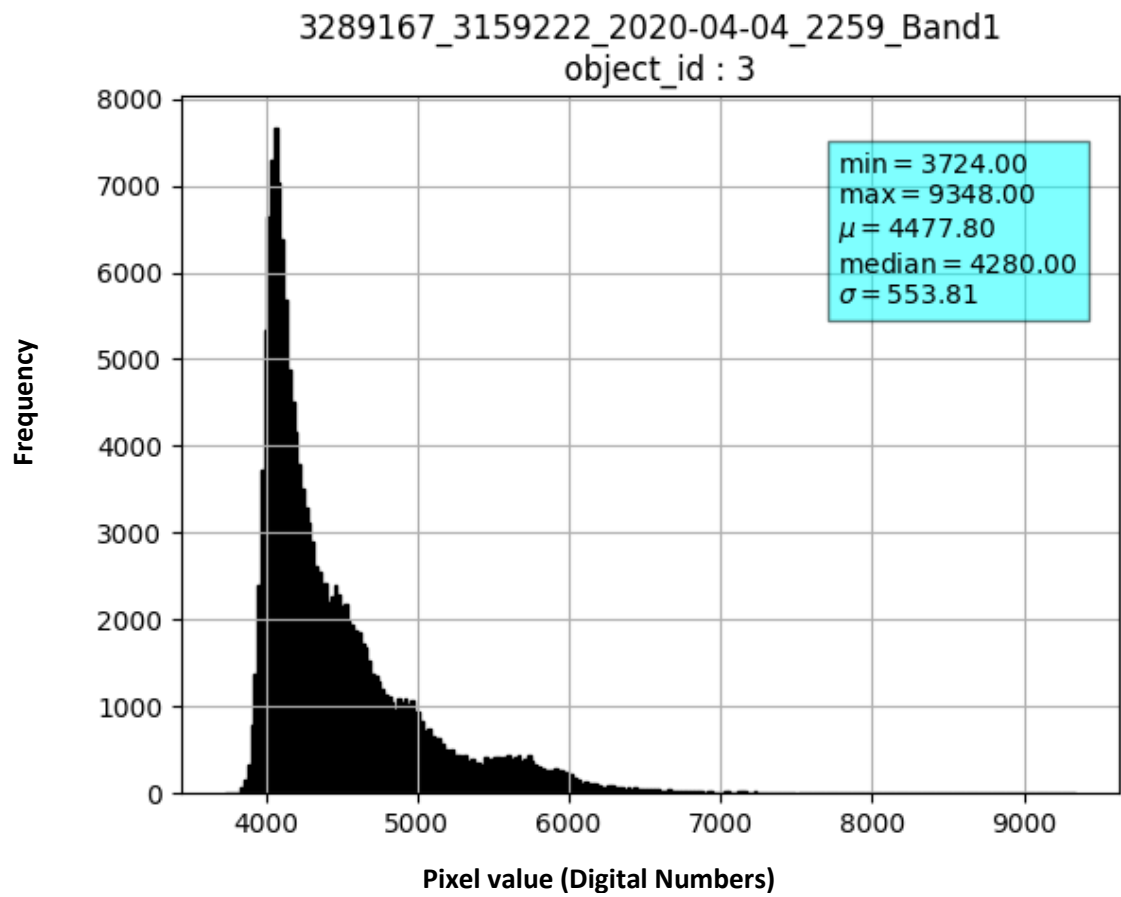
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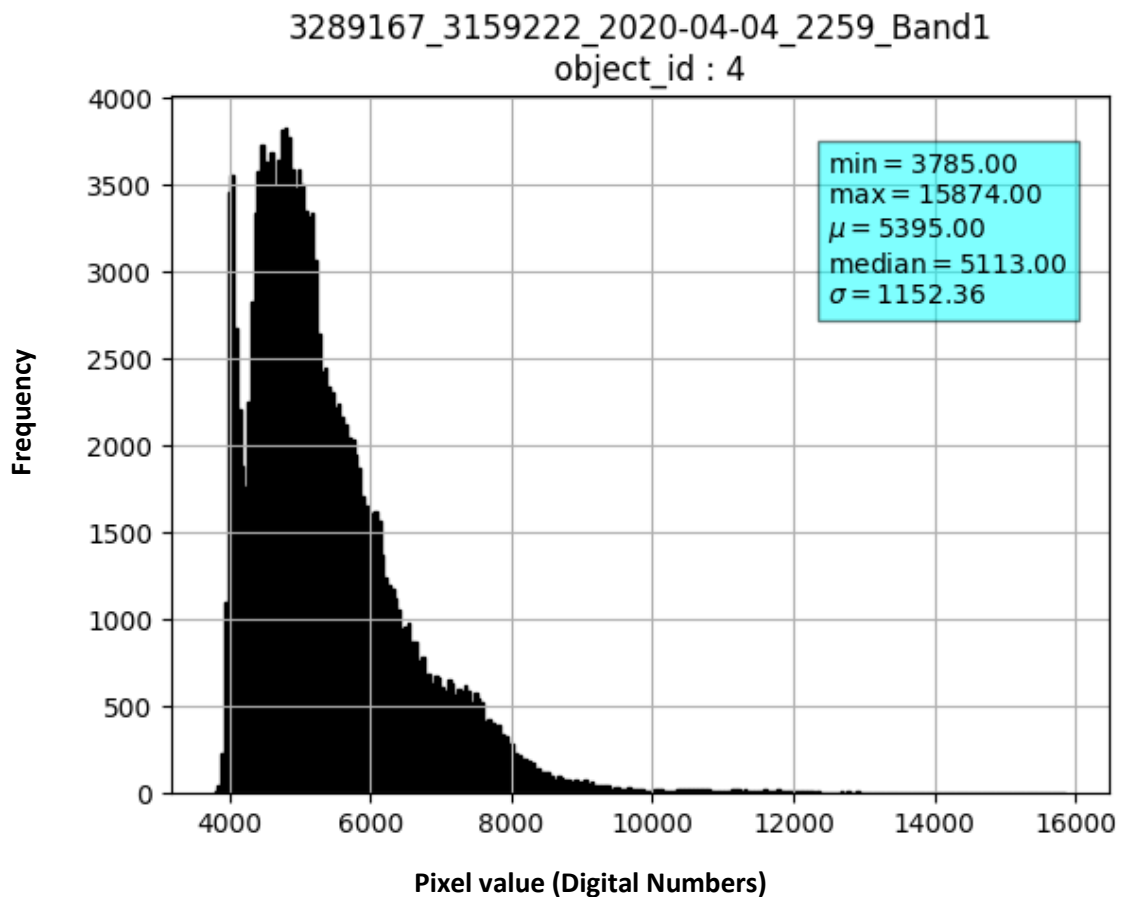
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Id 04

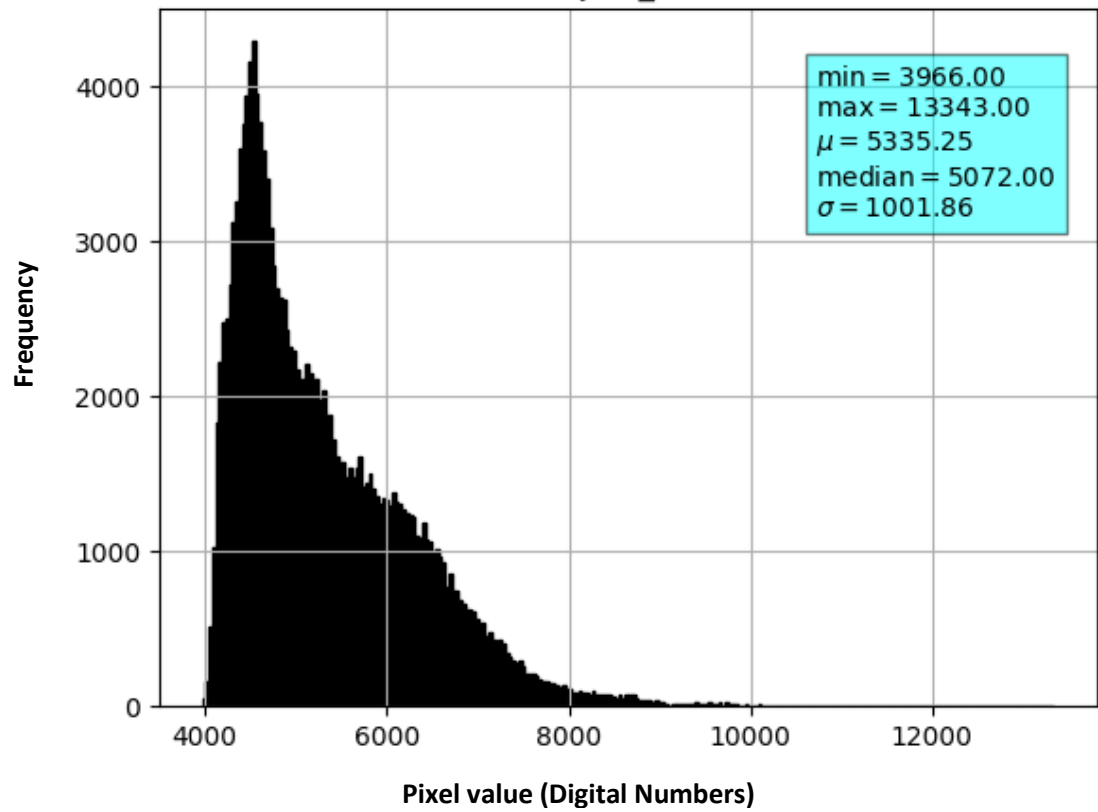
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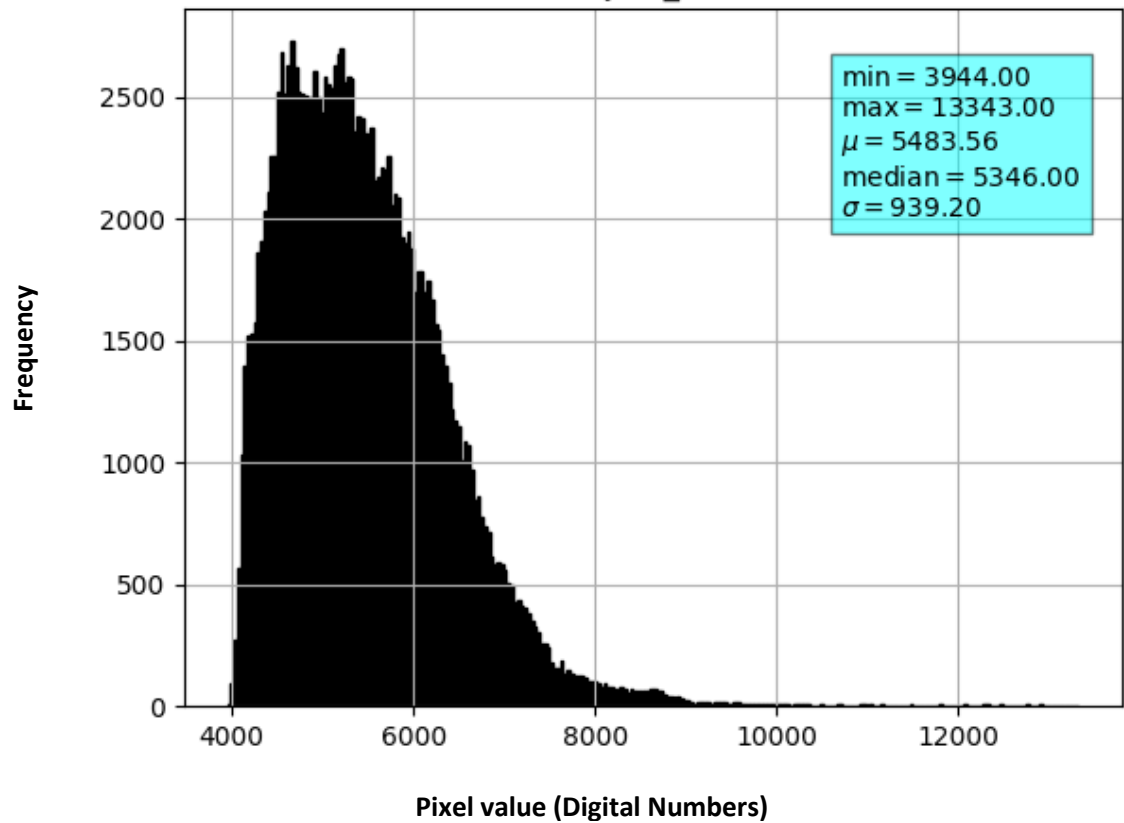
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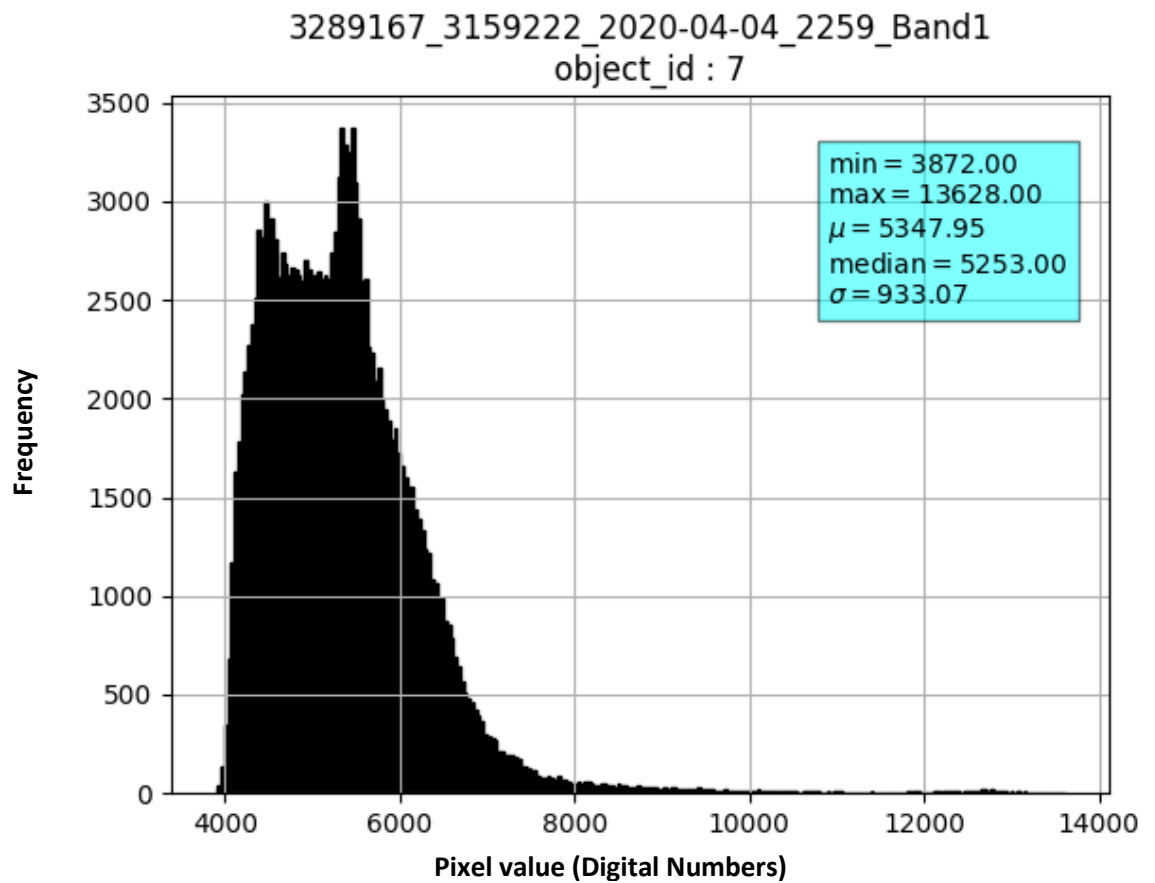
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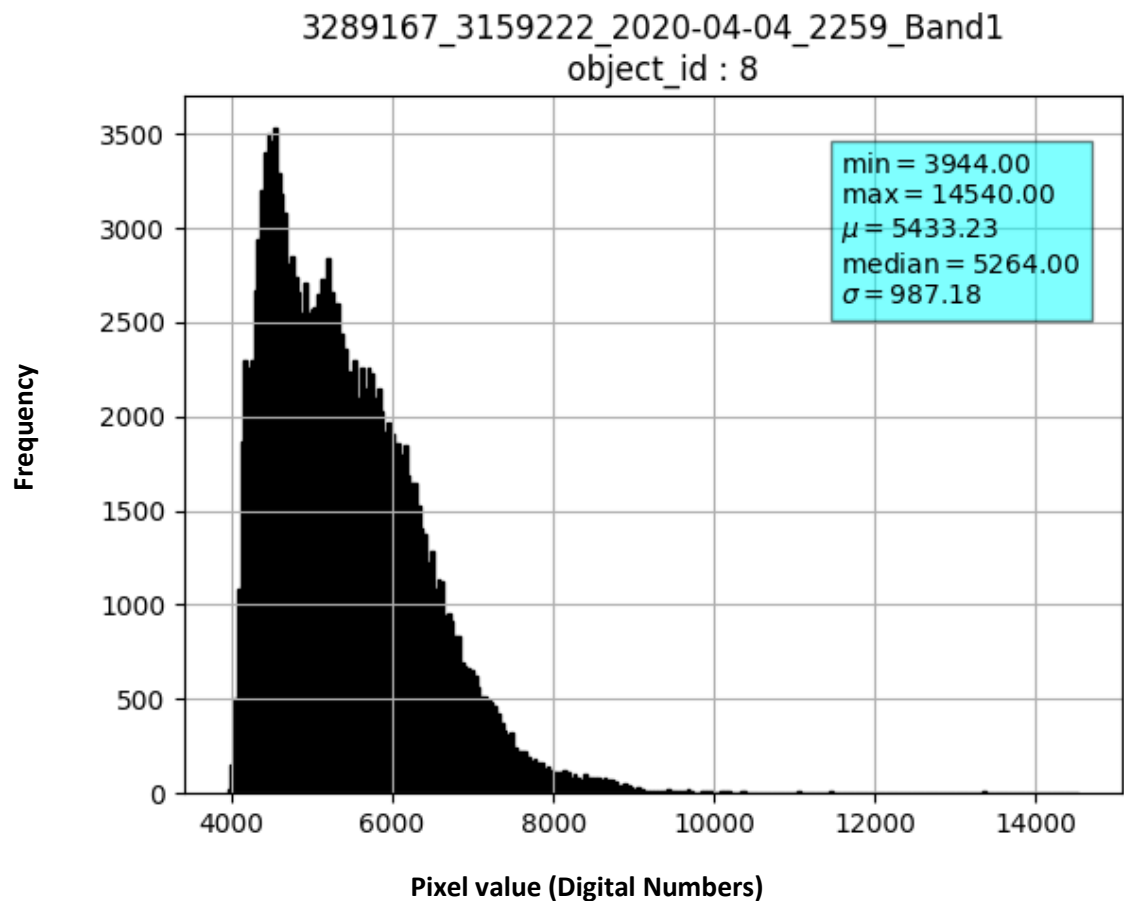
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Id 08

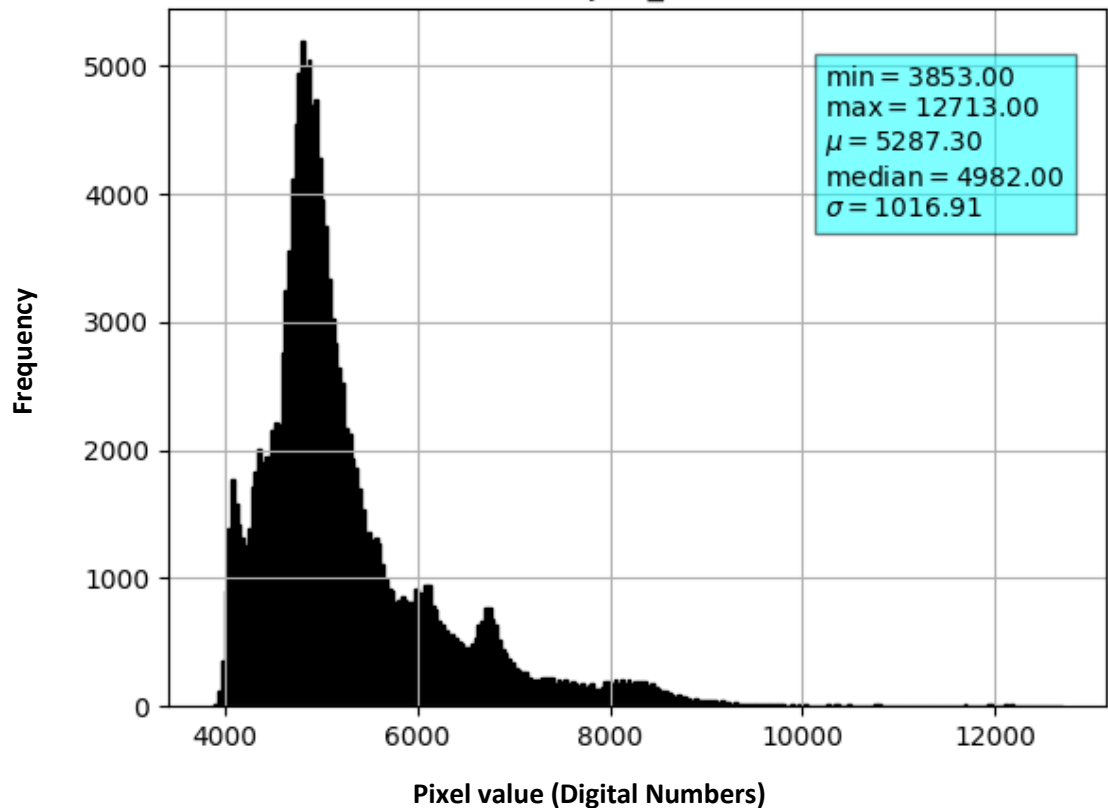
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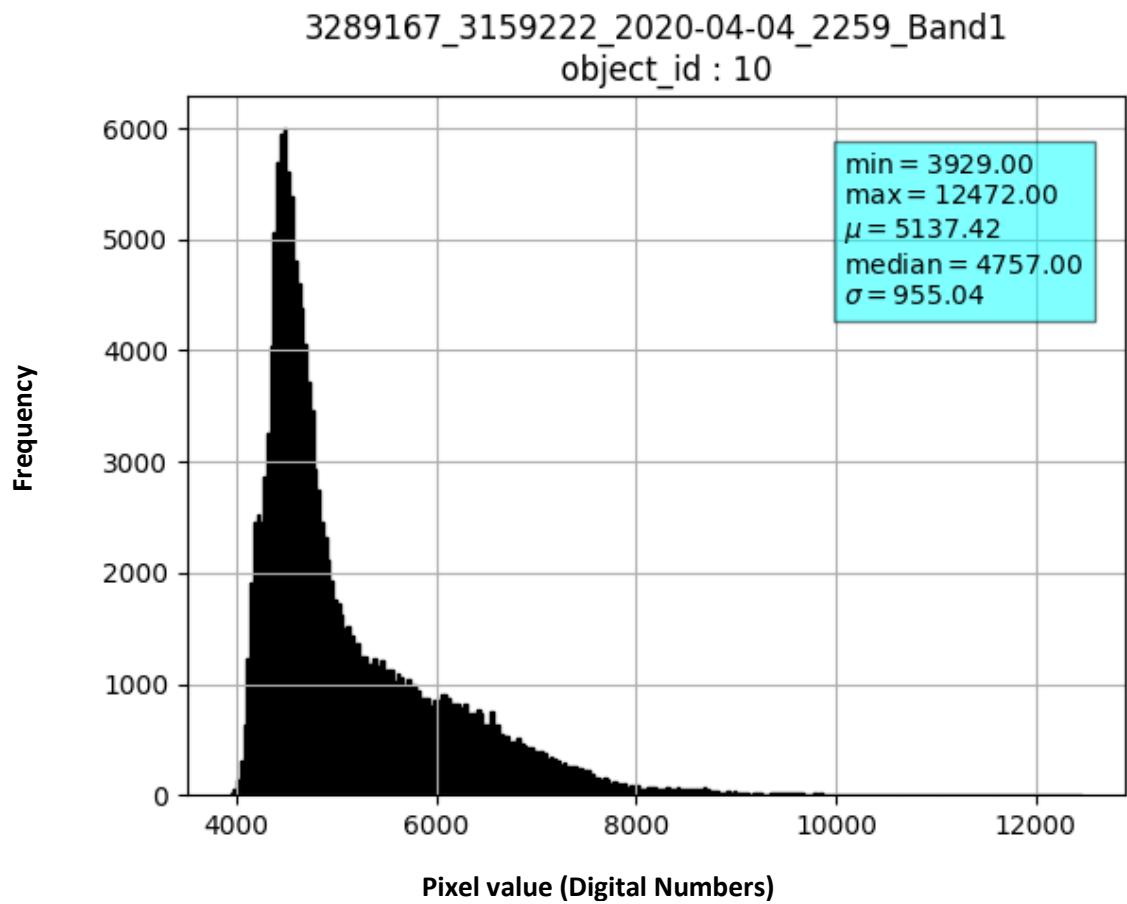
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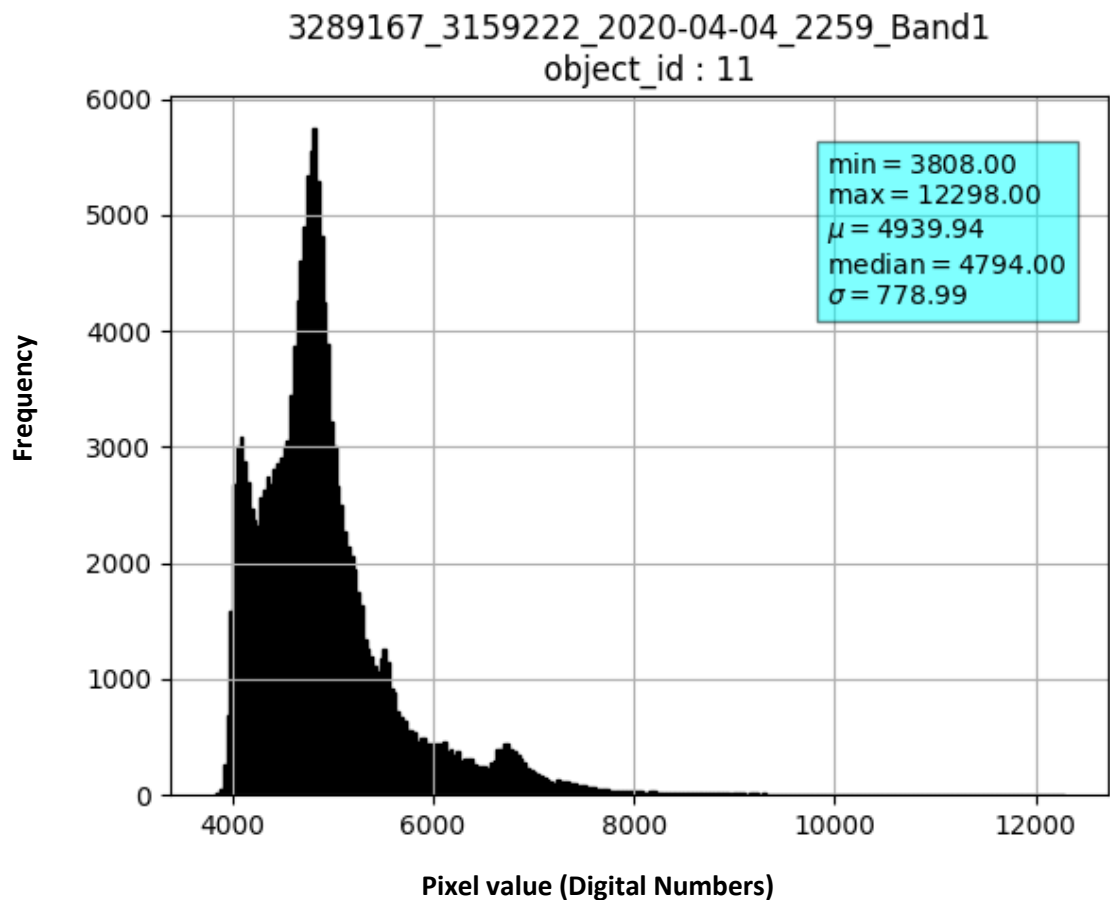
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Id 11

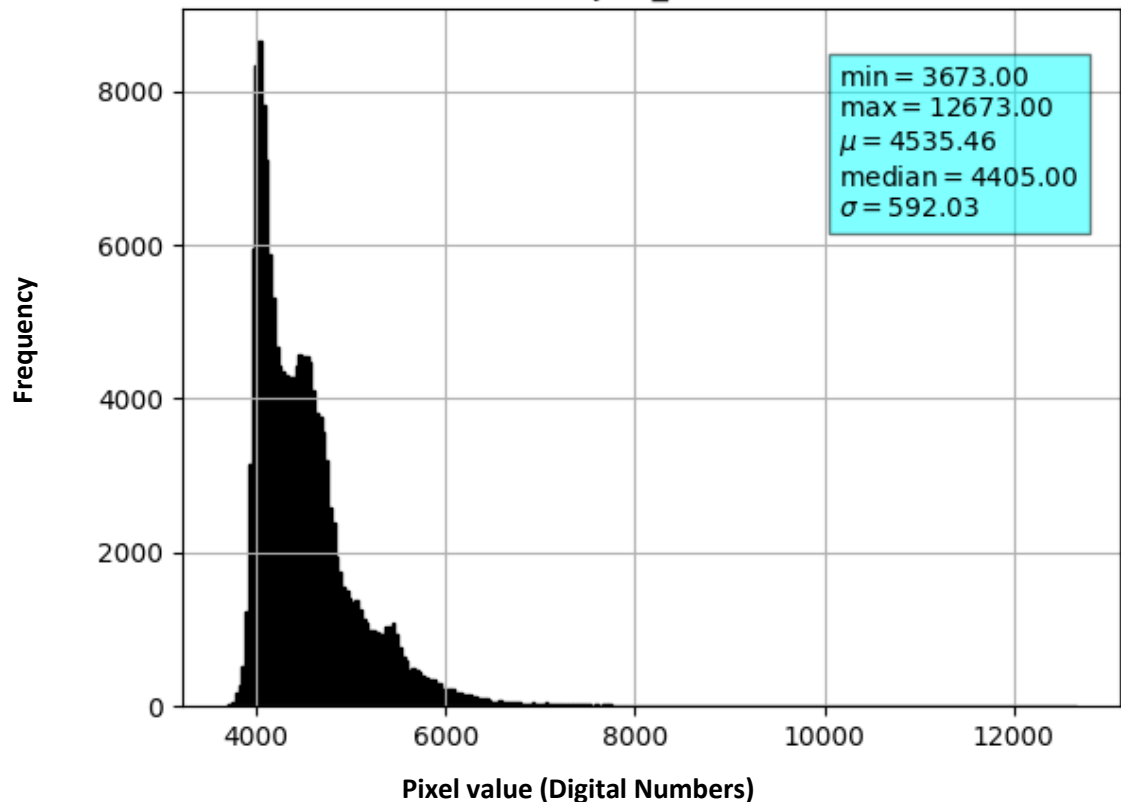
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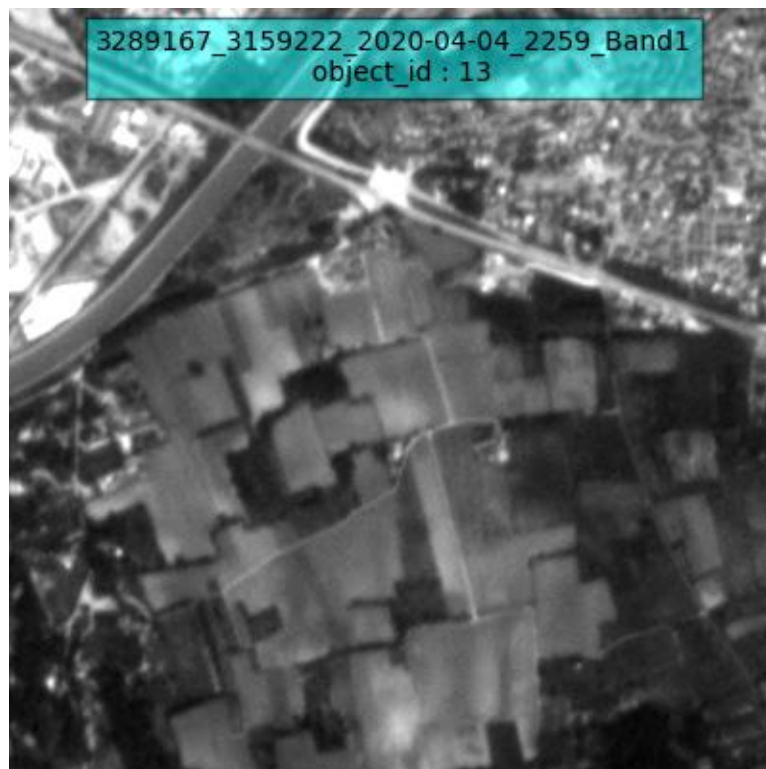
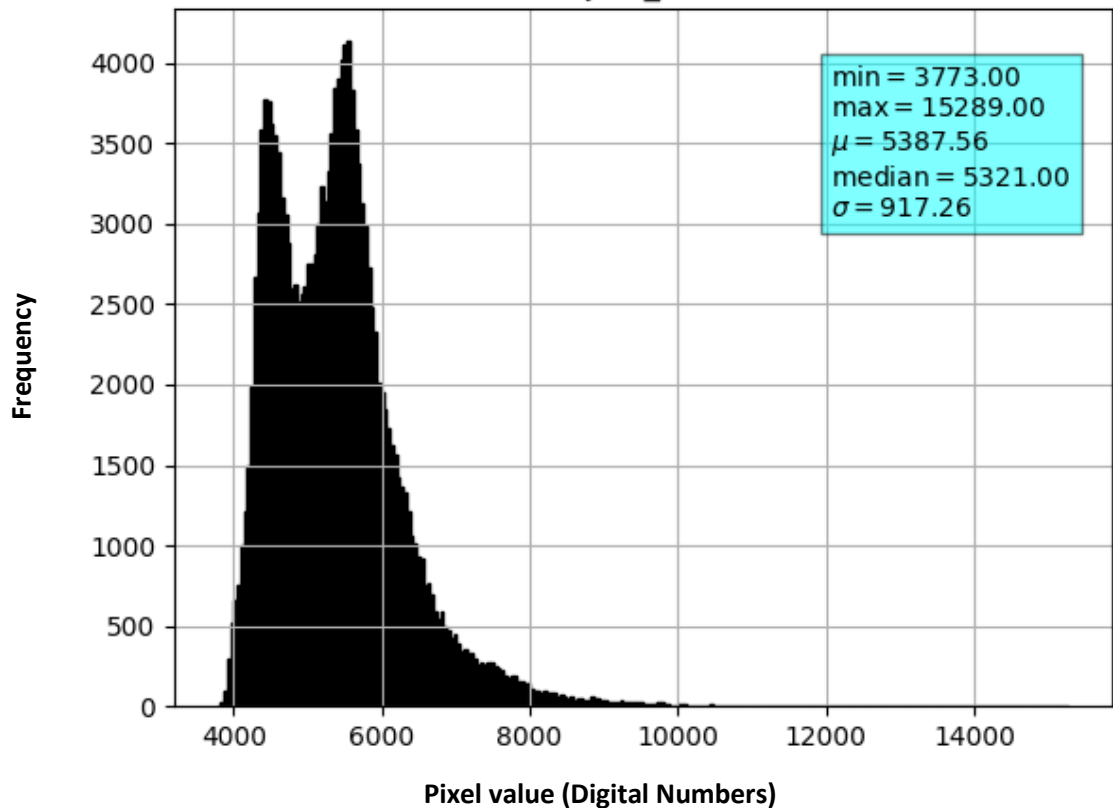
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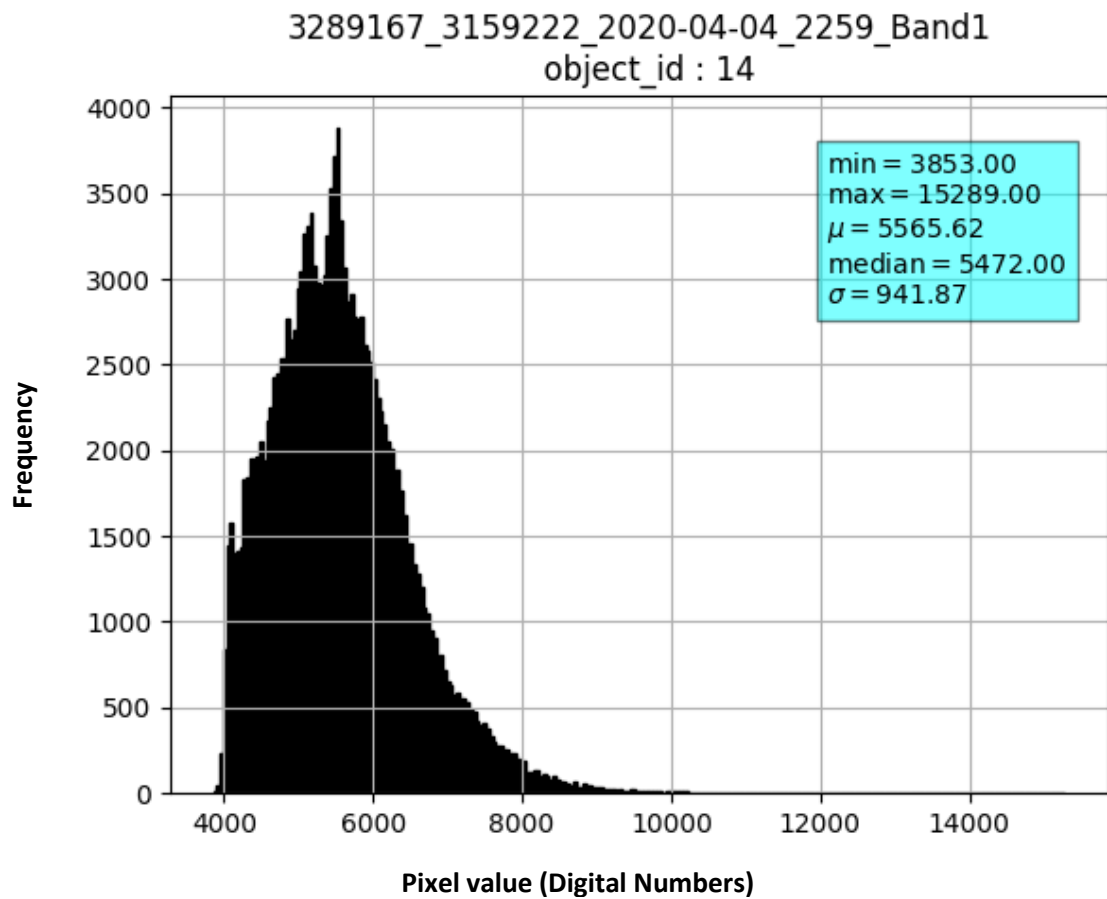
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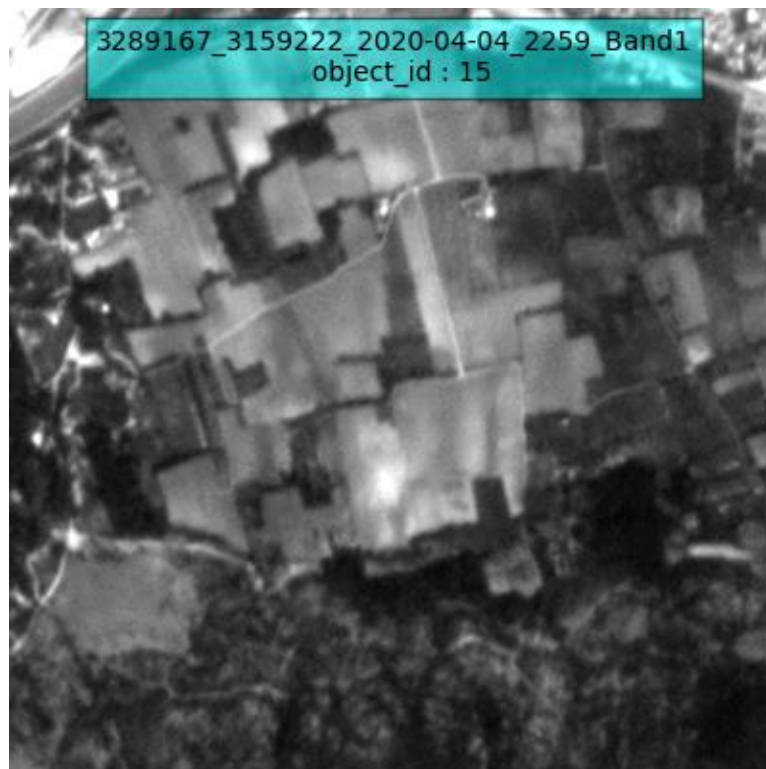
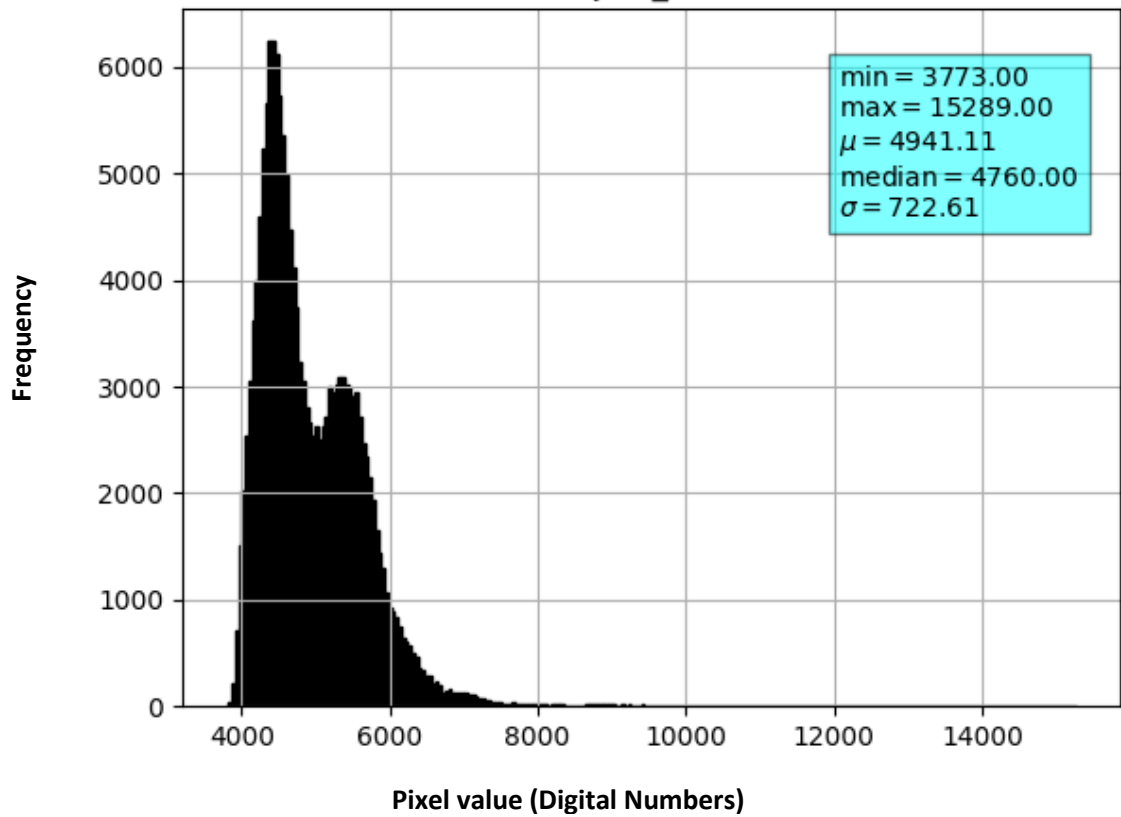
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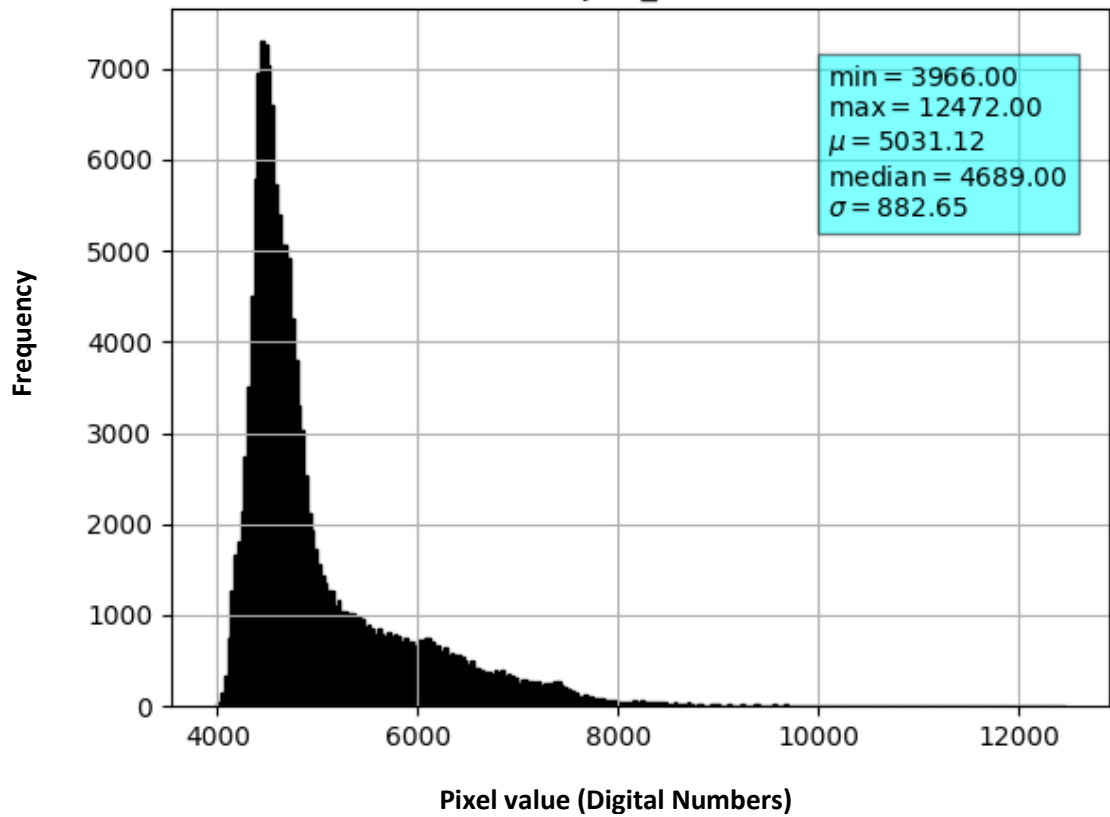
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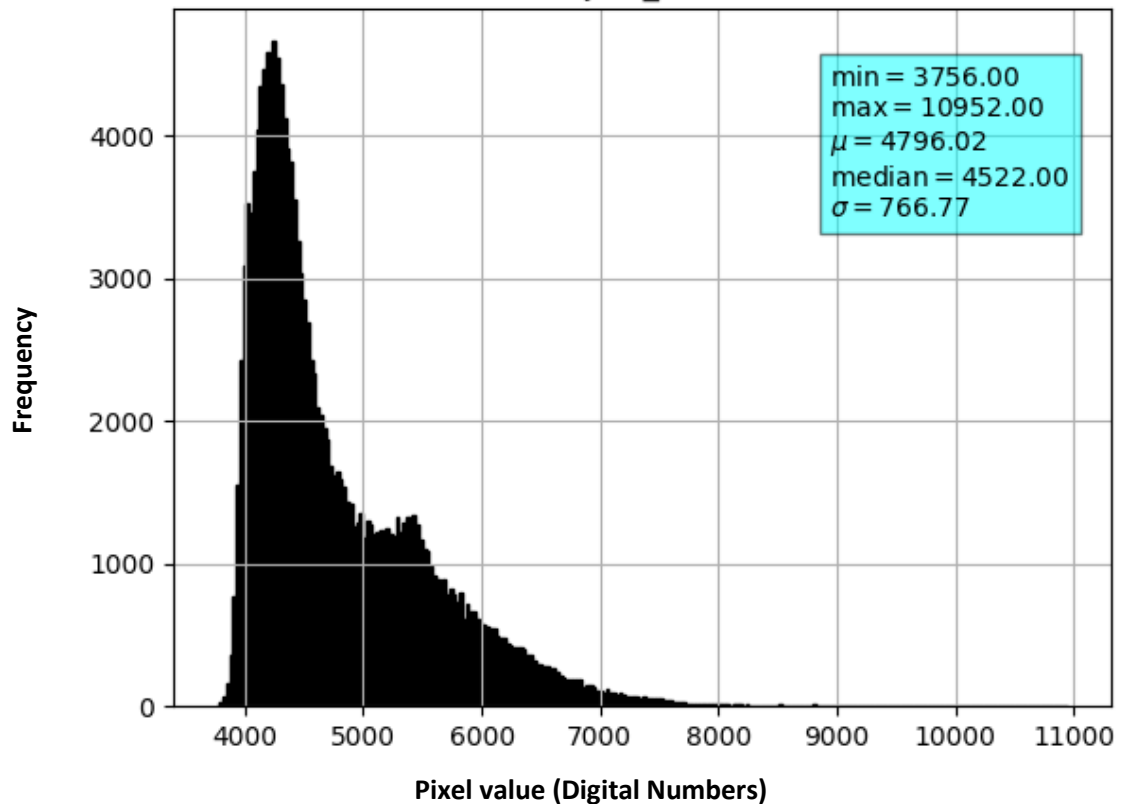
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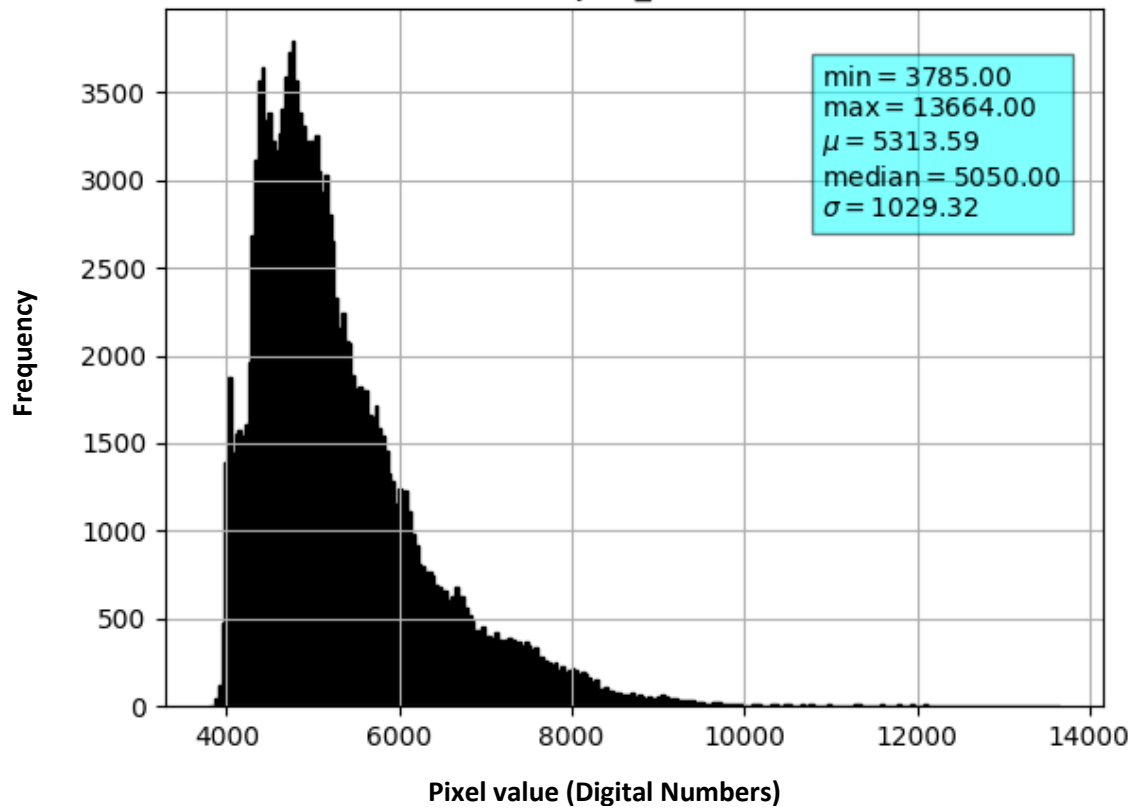
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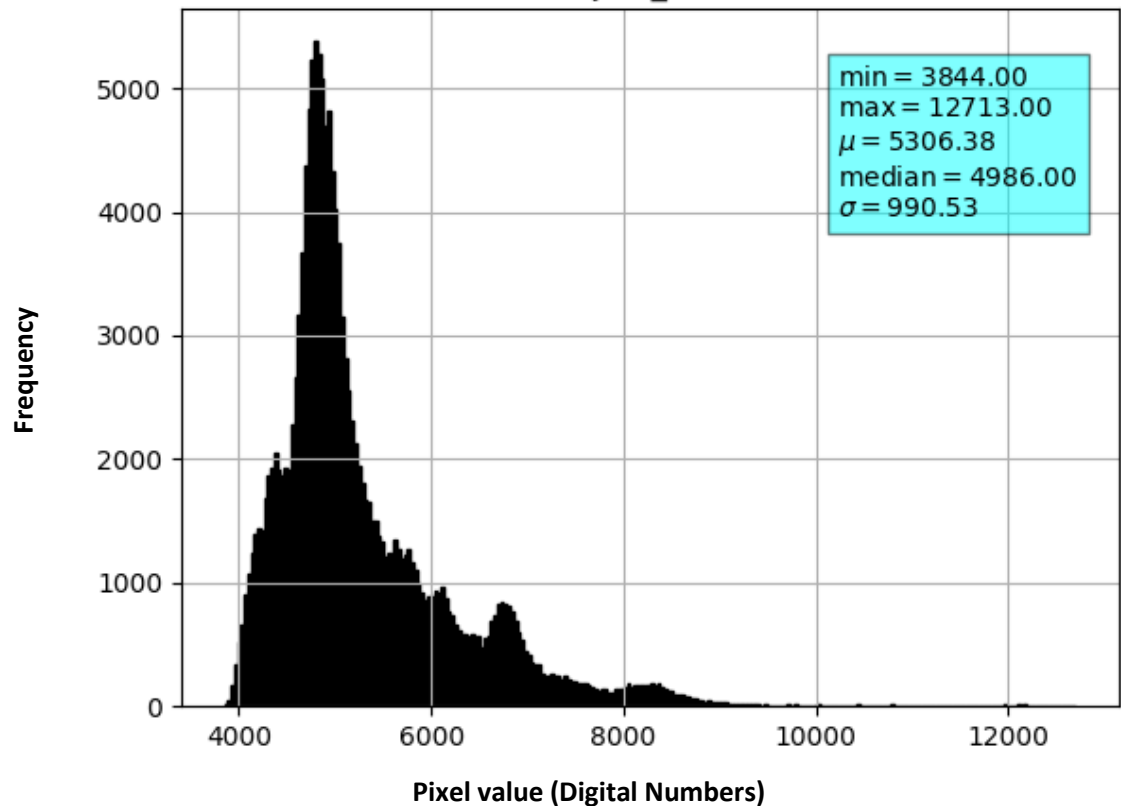
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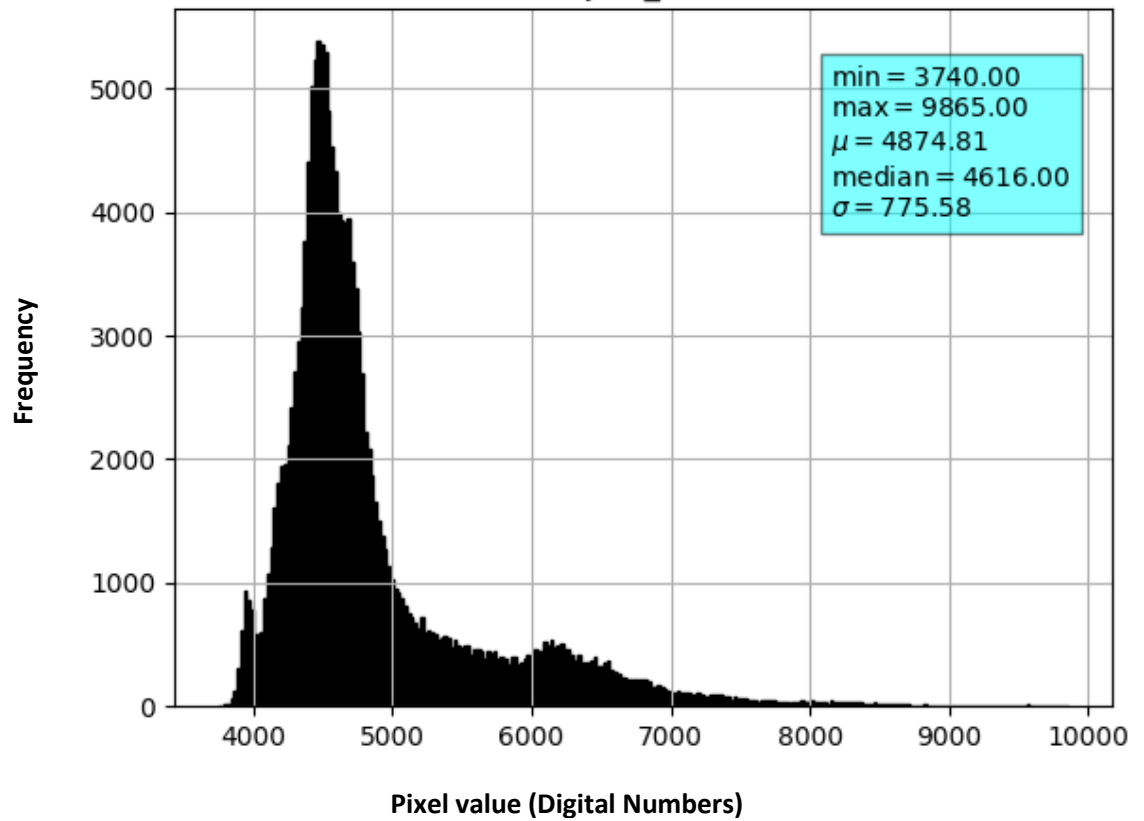
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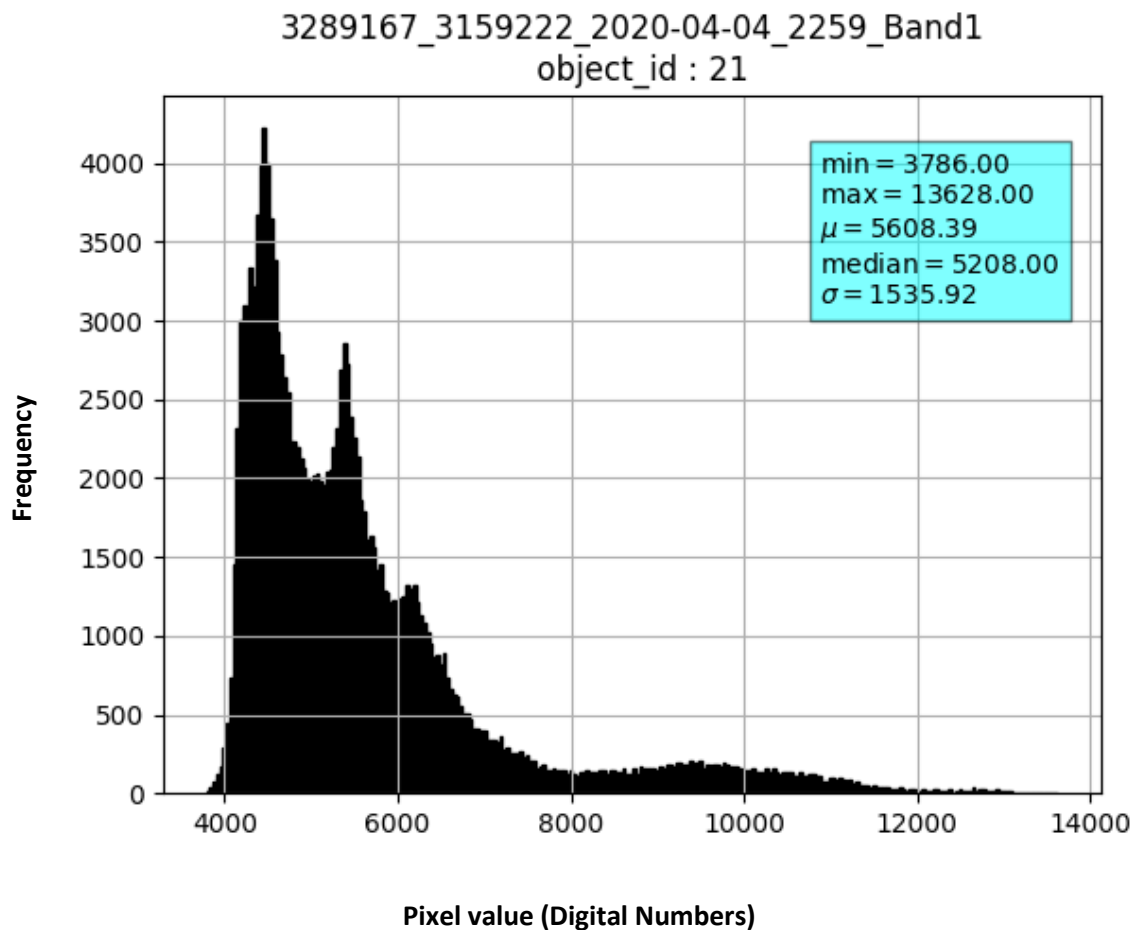
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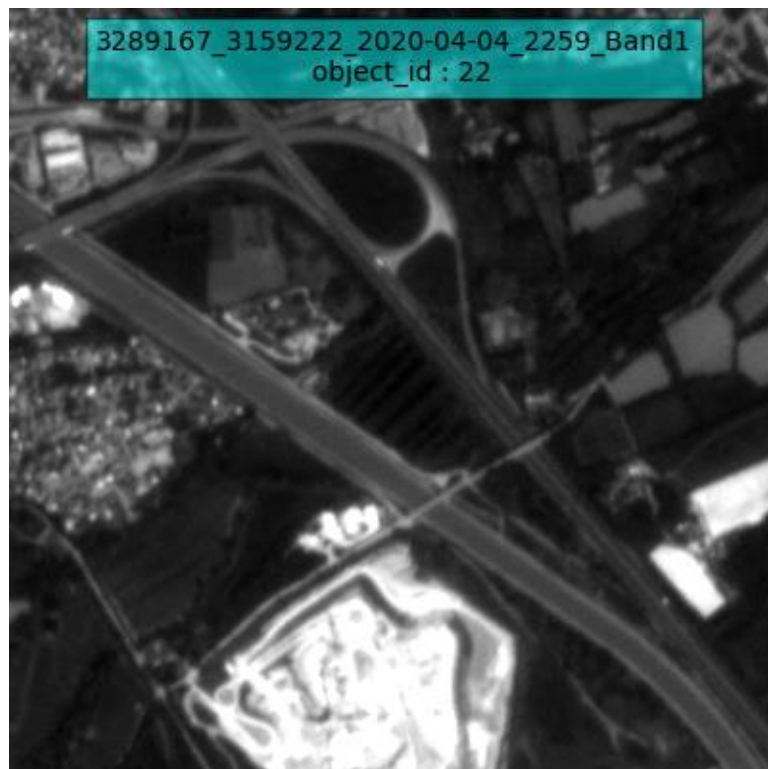
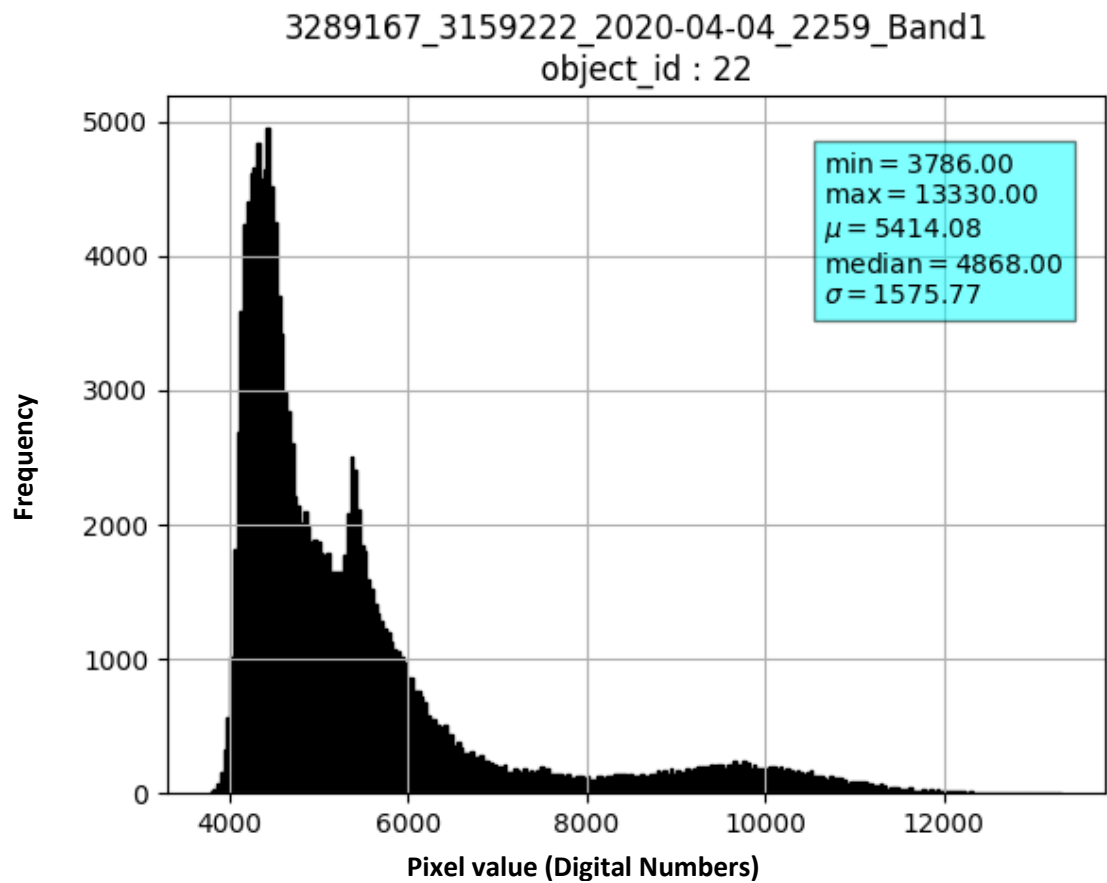
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Id 22

2.5.1.22



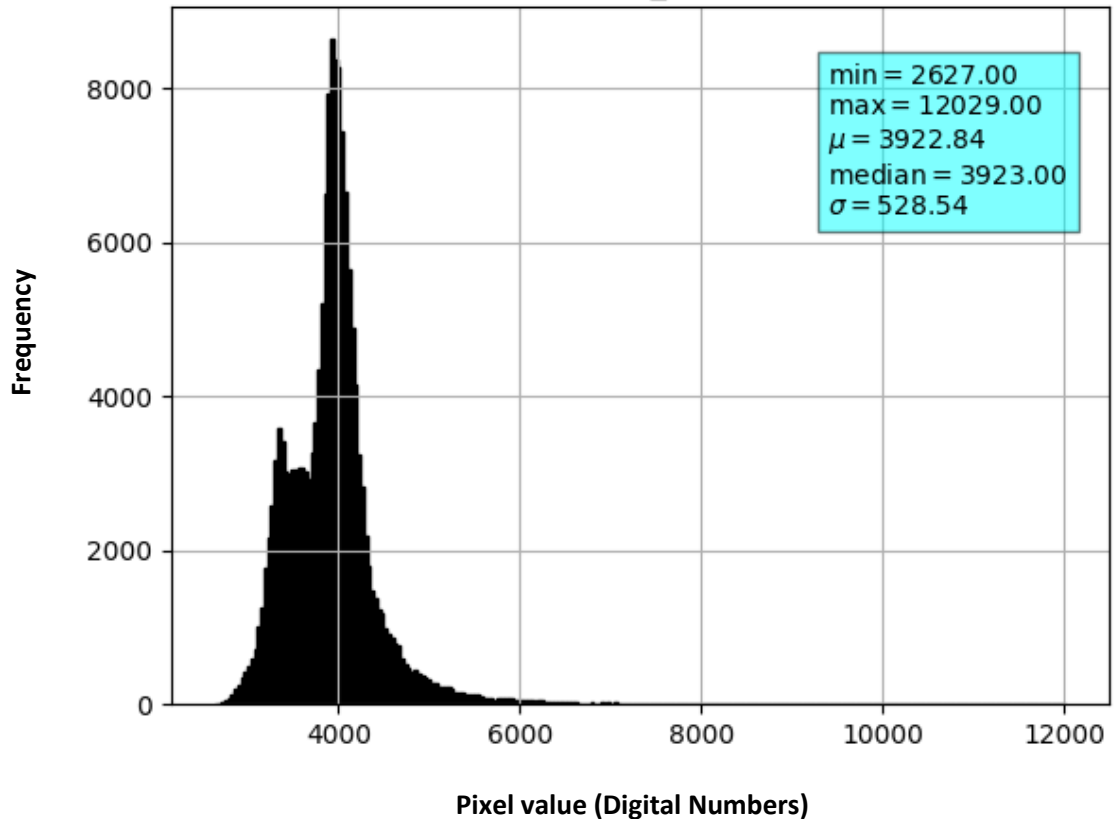
SuperDove – Green Band (Band 2)

Id 01

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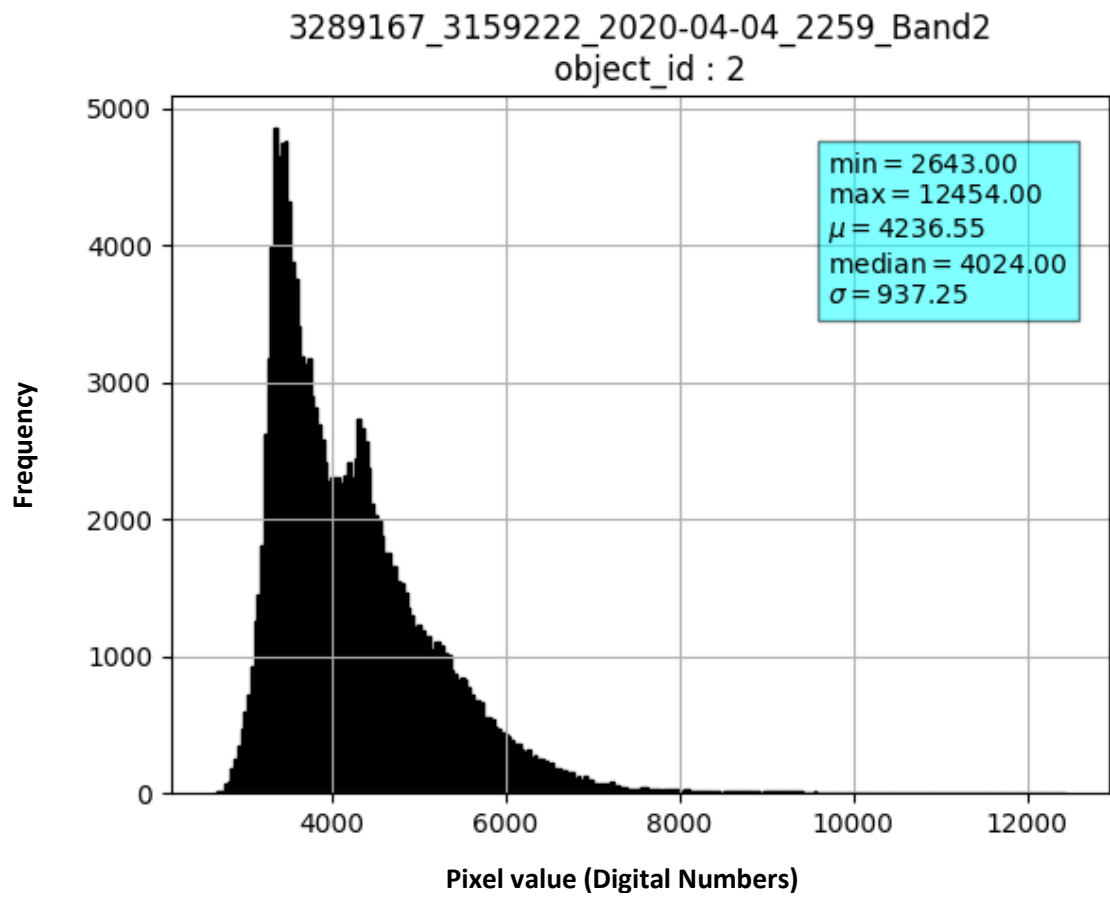
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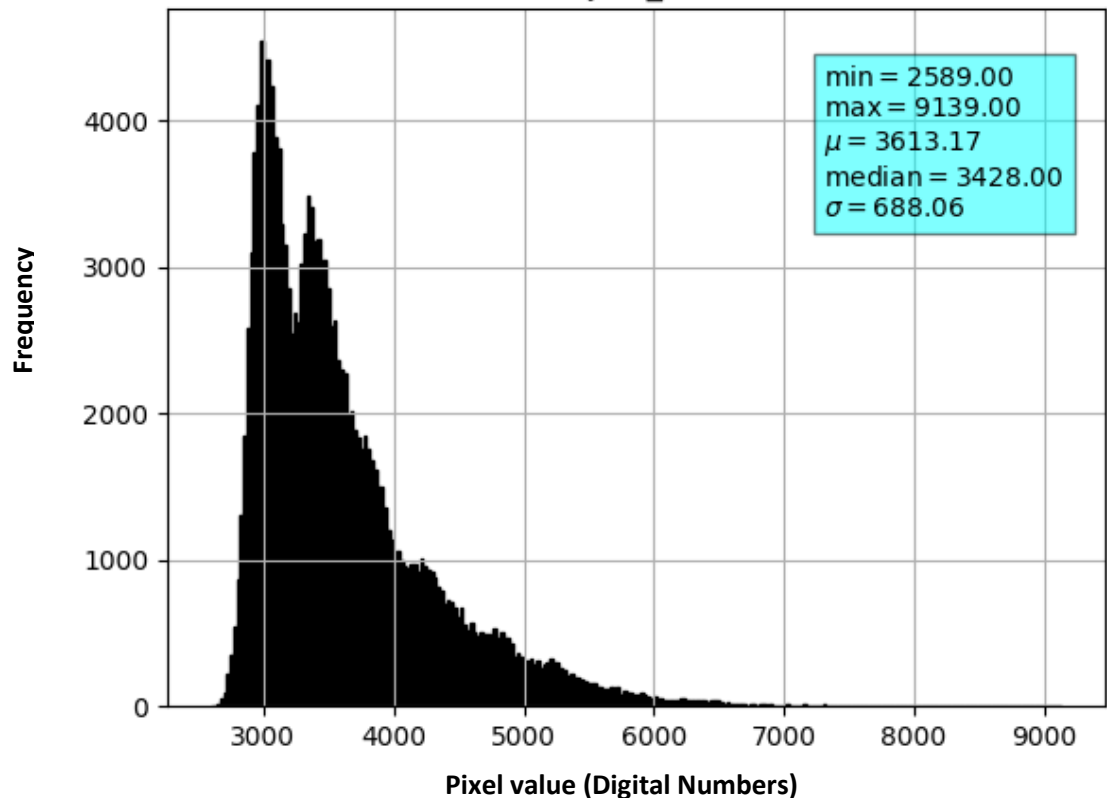
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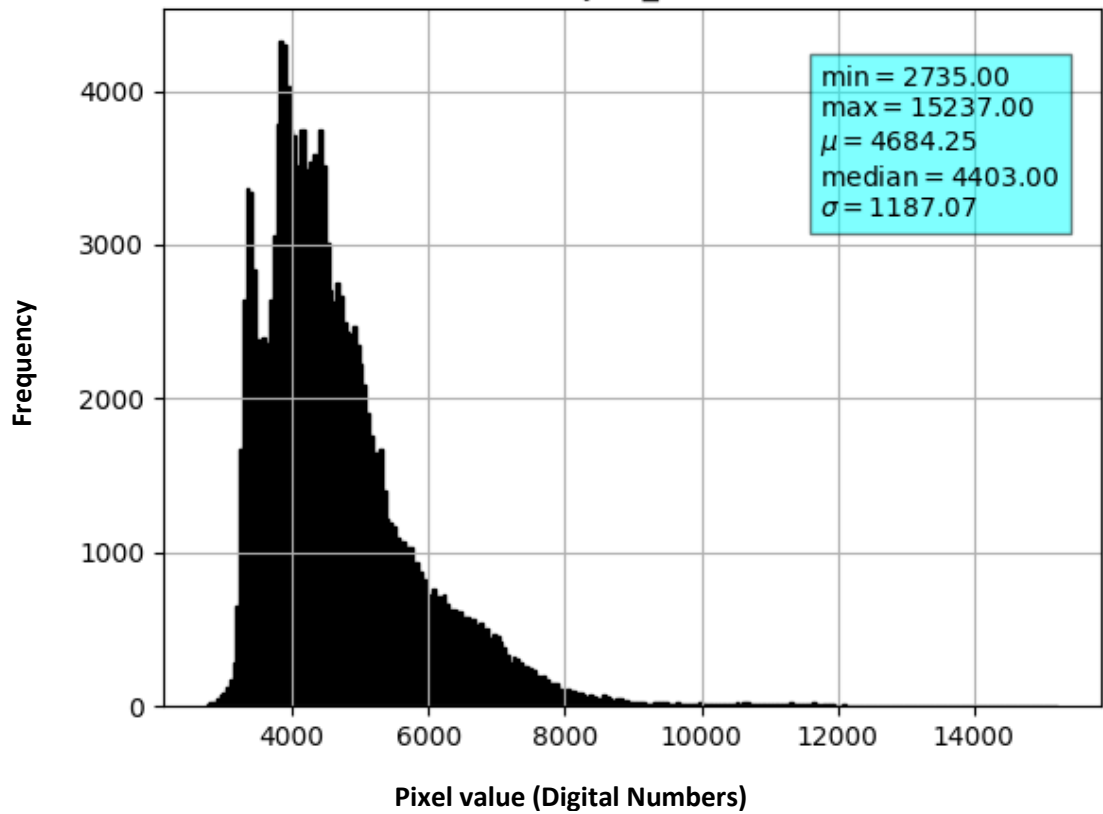
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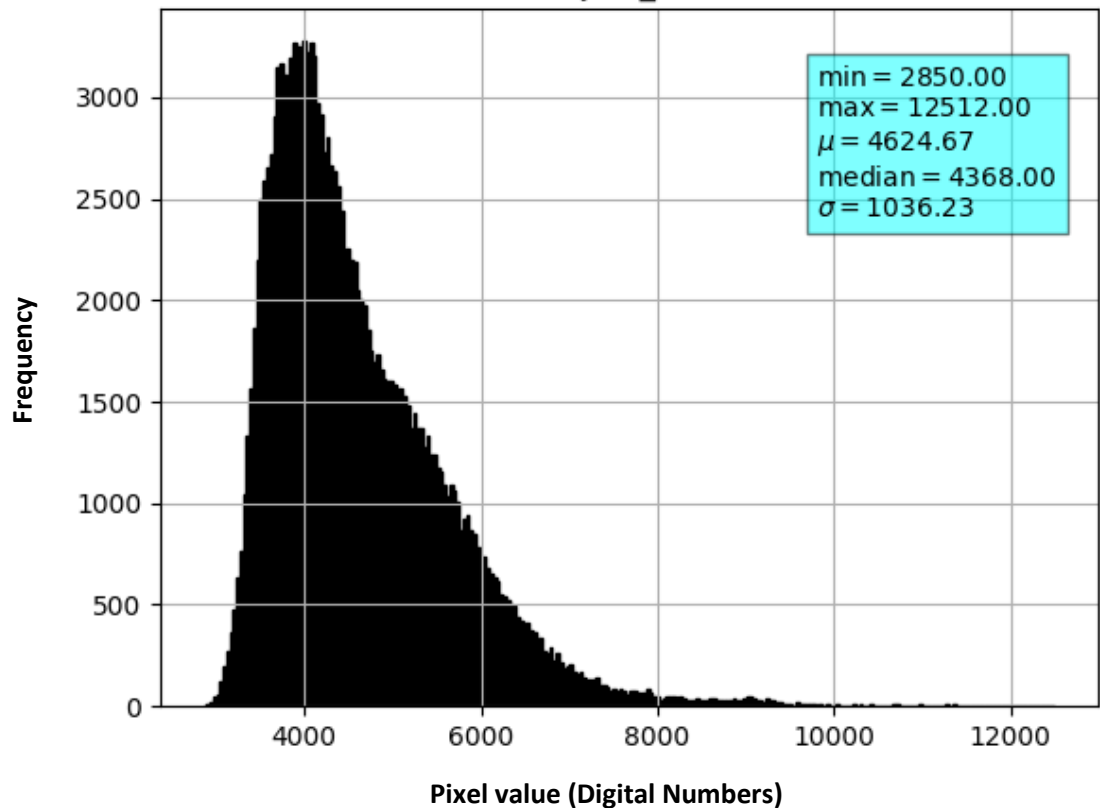
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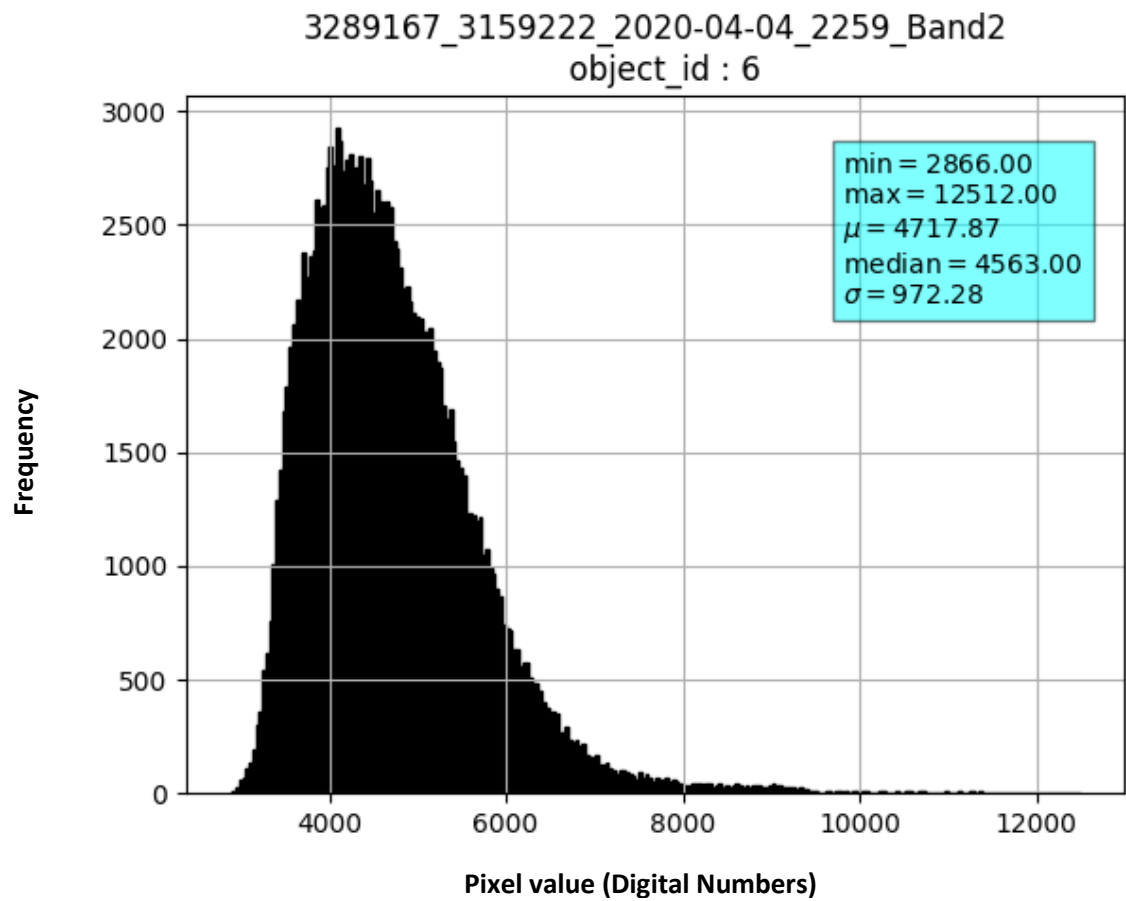
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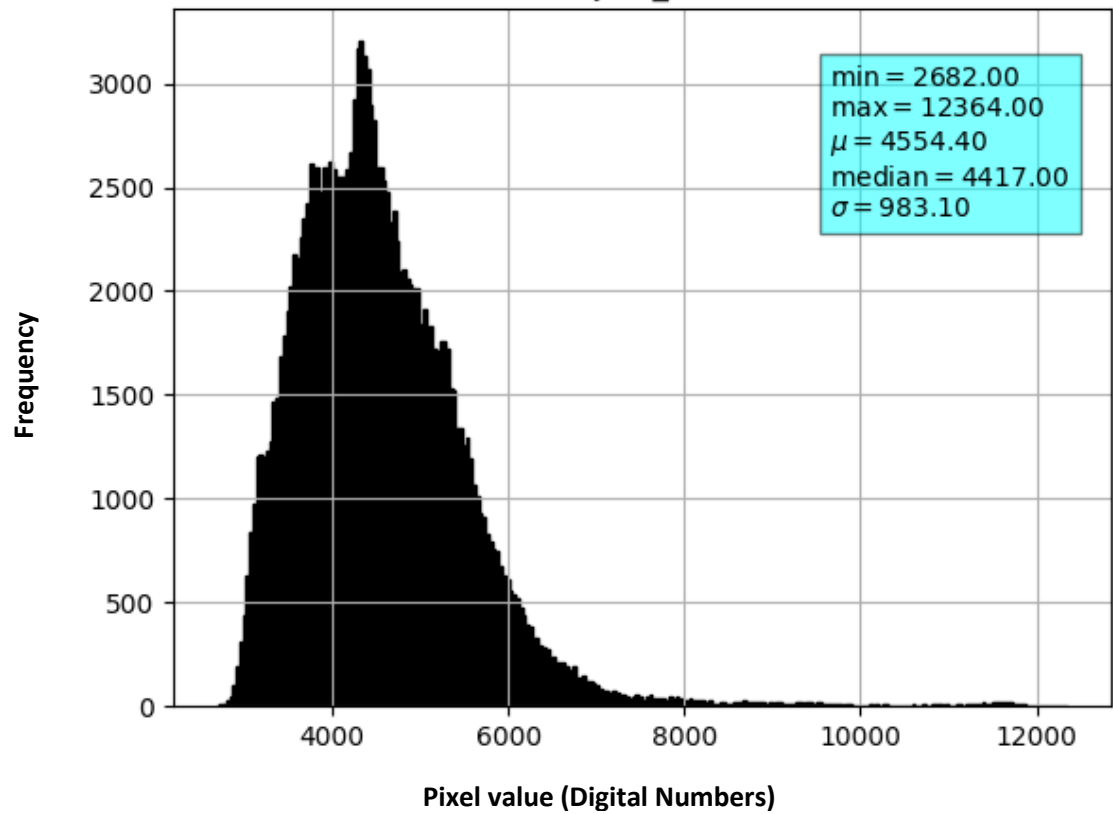
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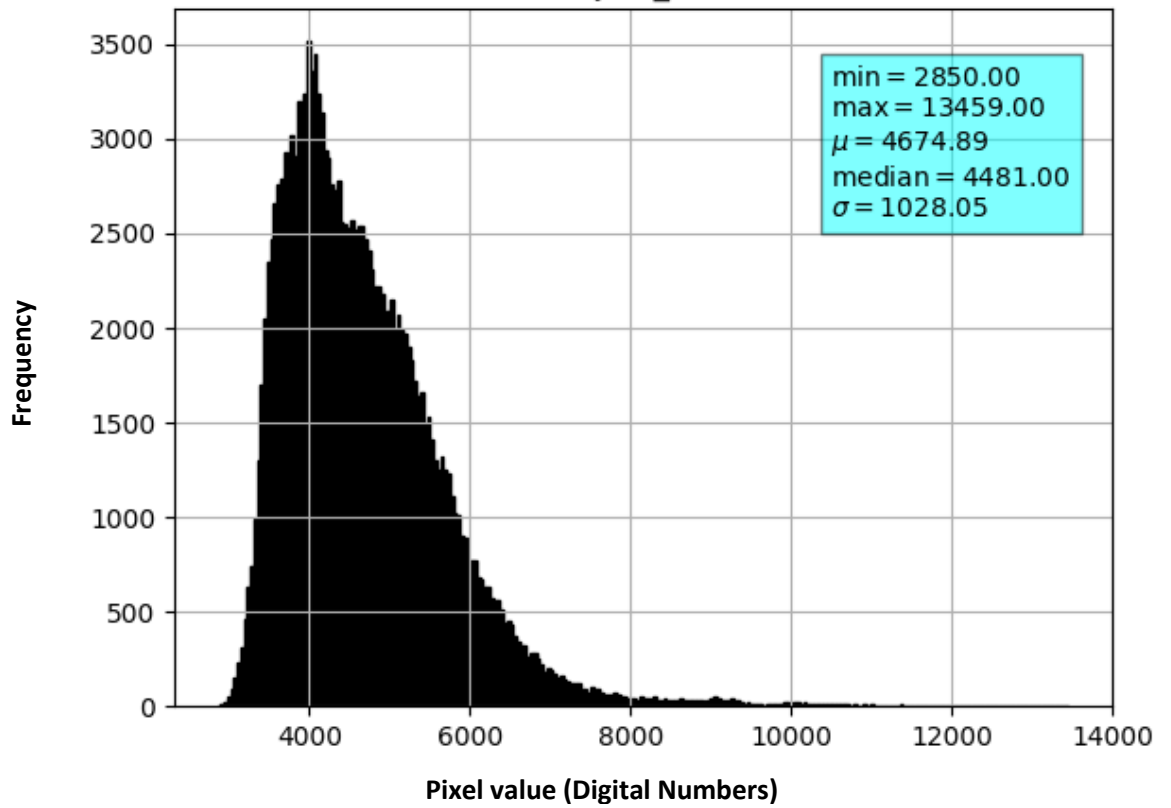
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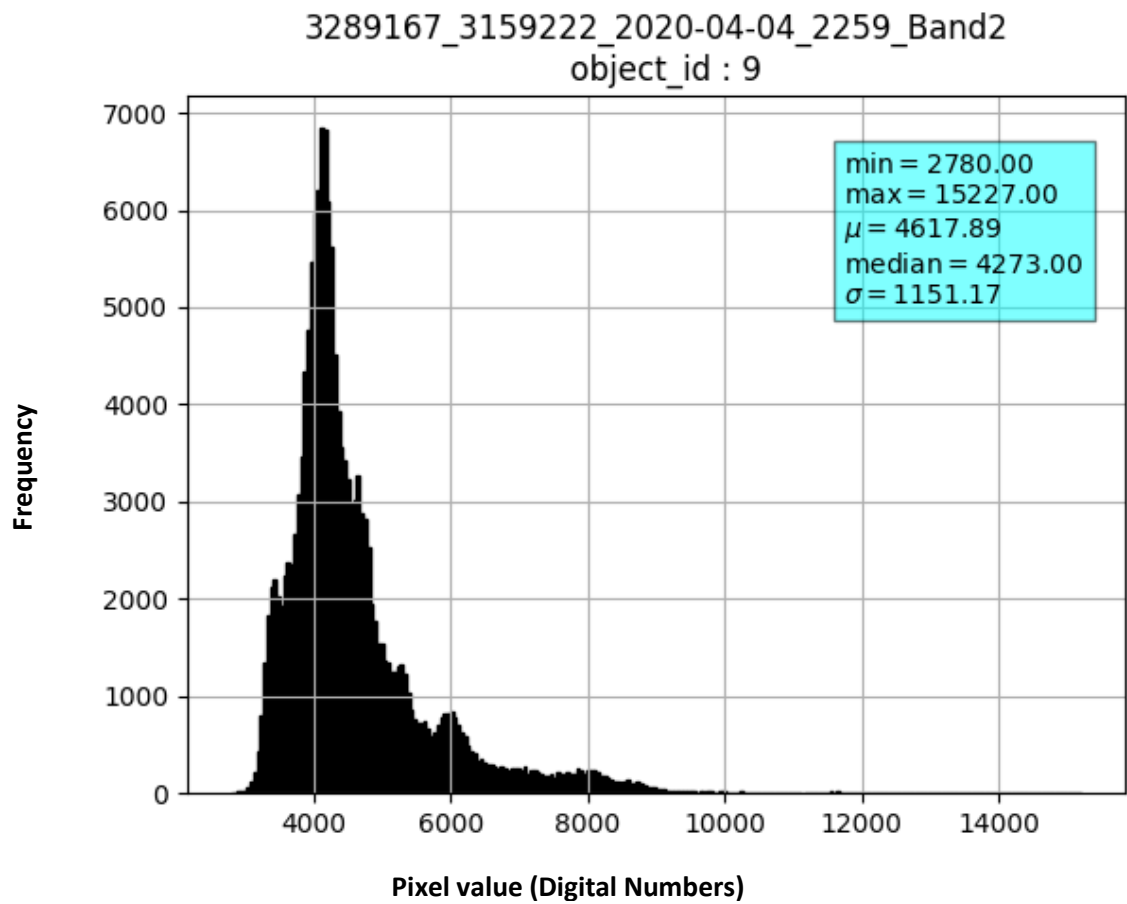
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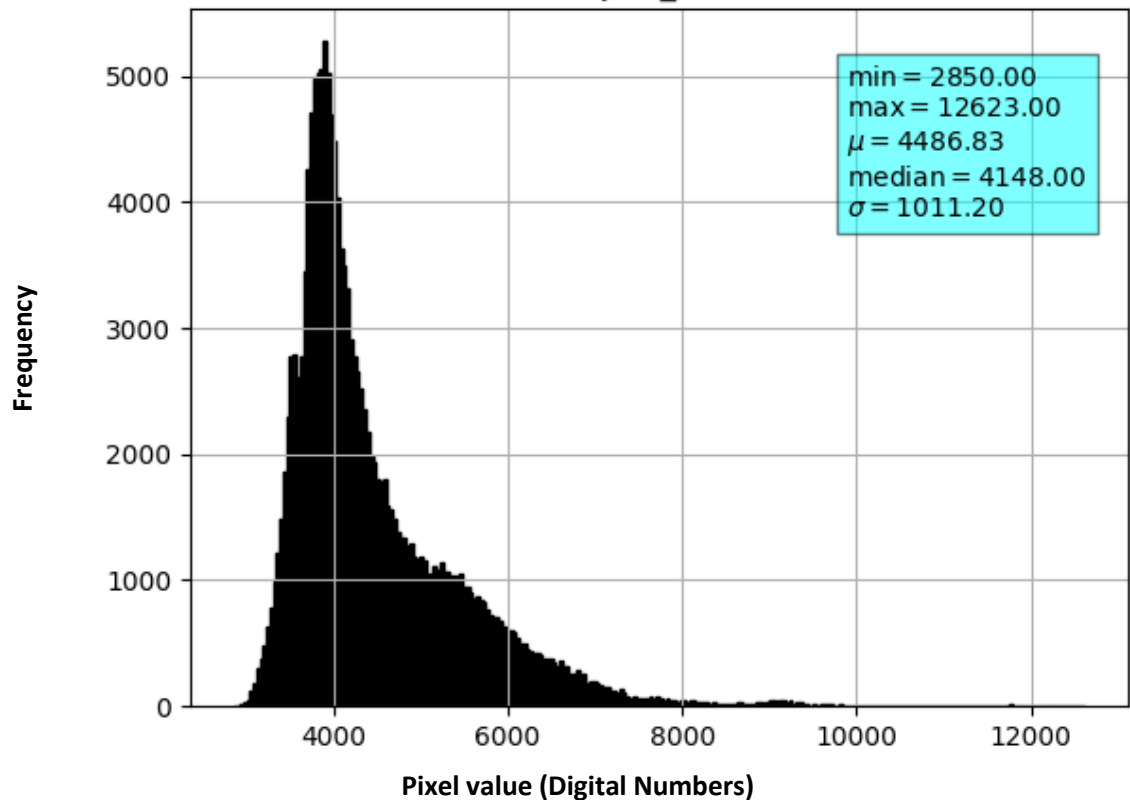
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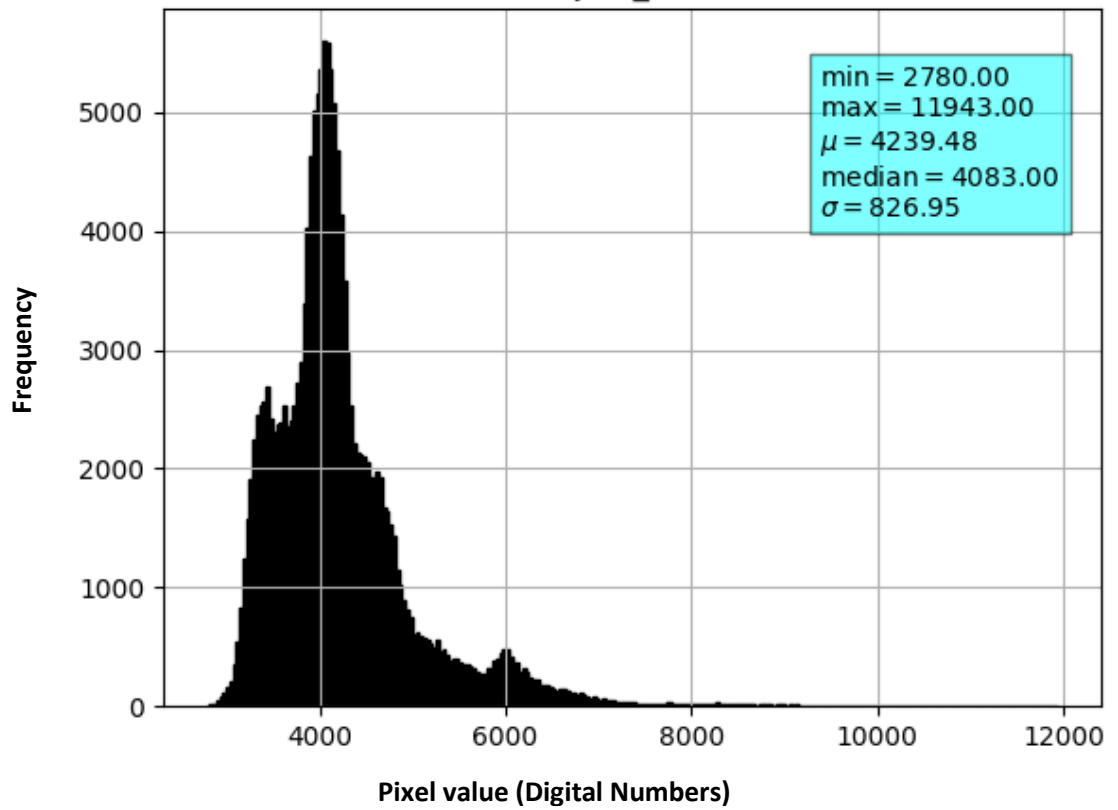
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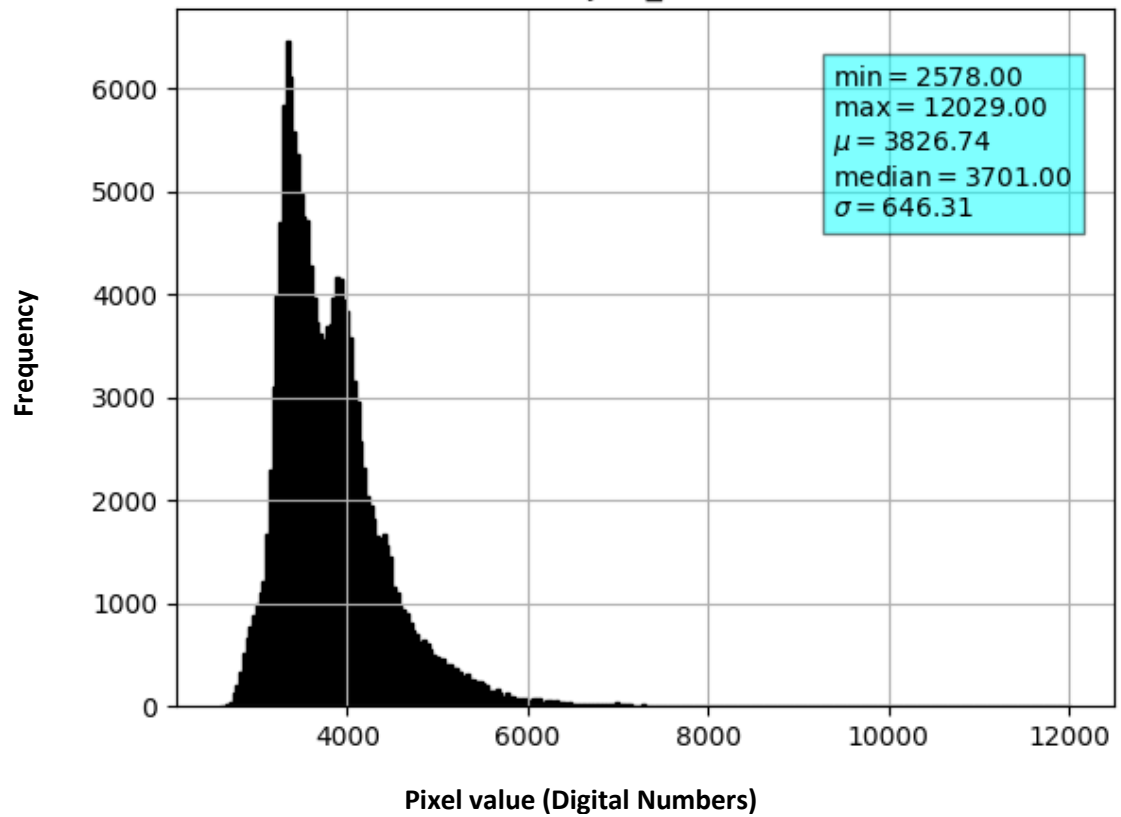
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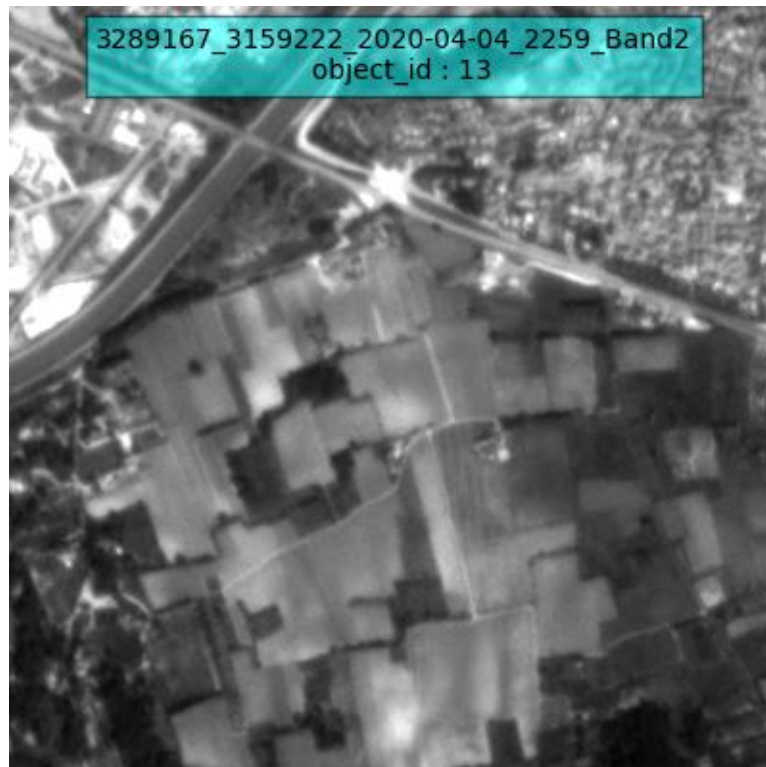
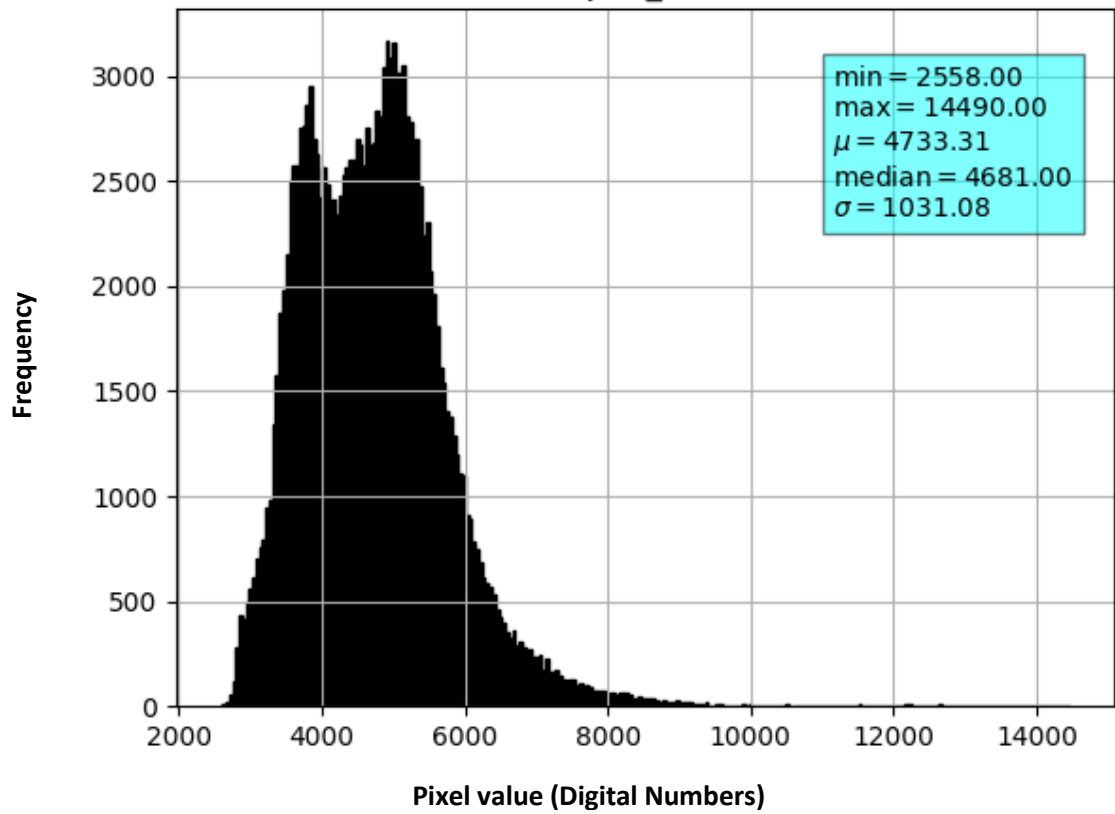
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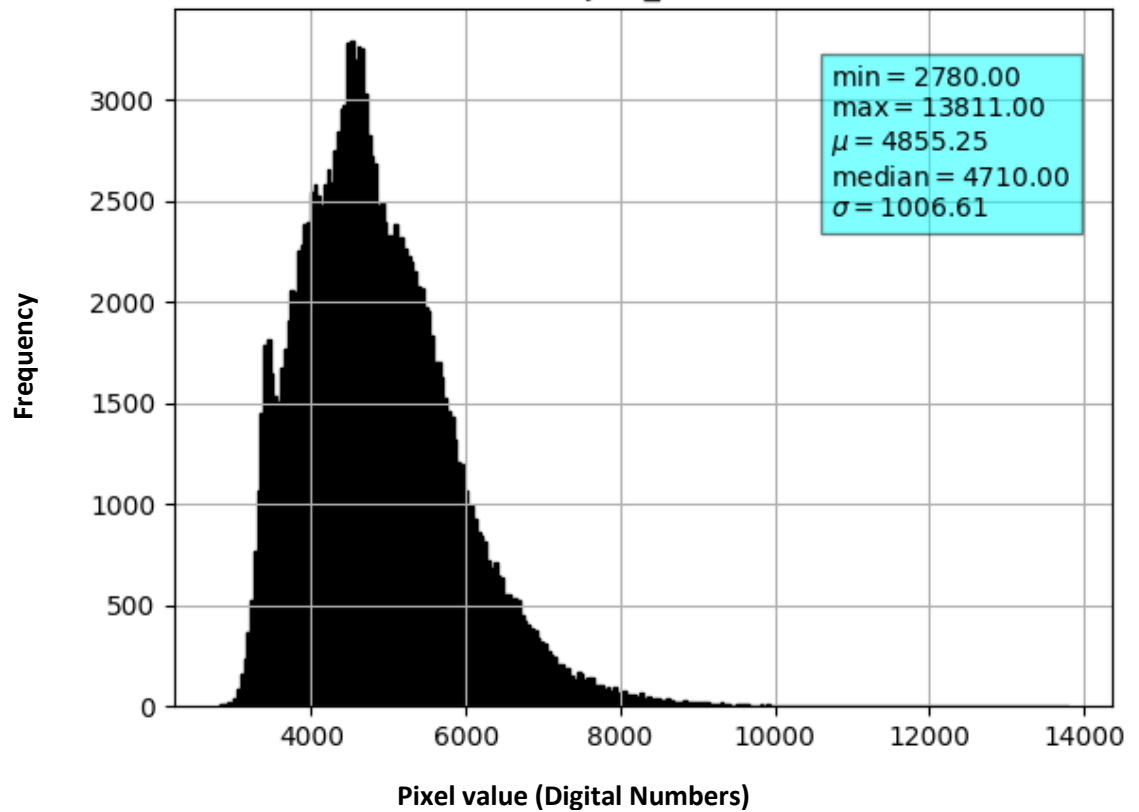
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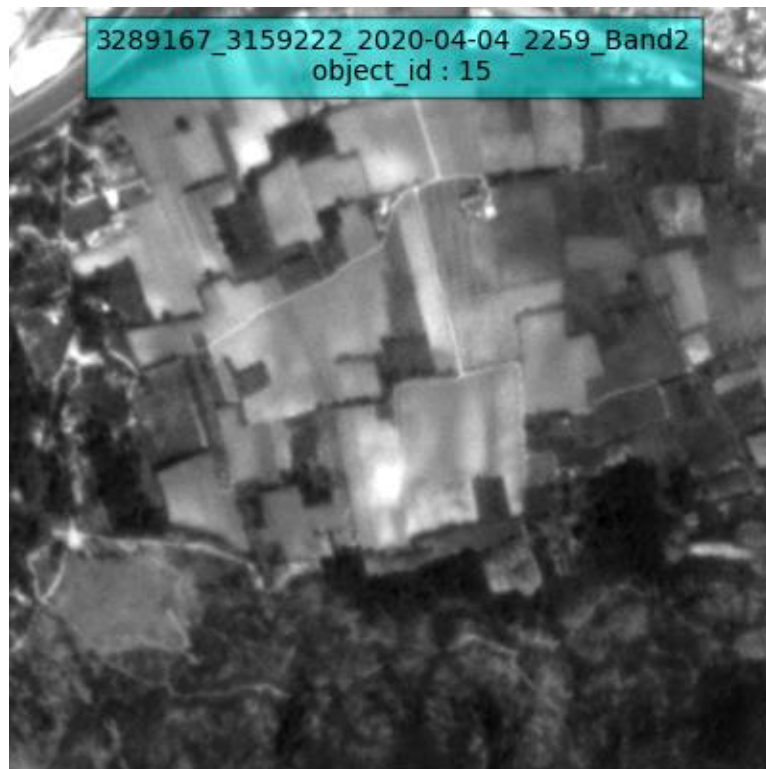
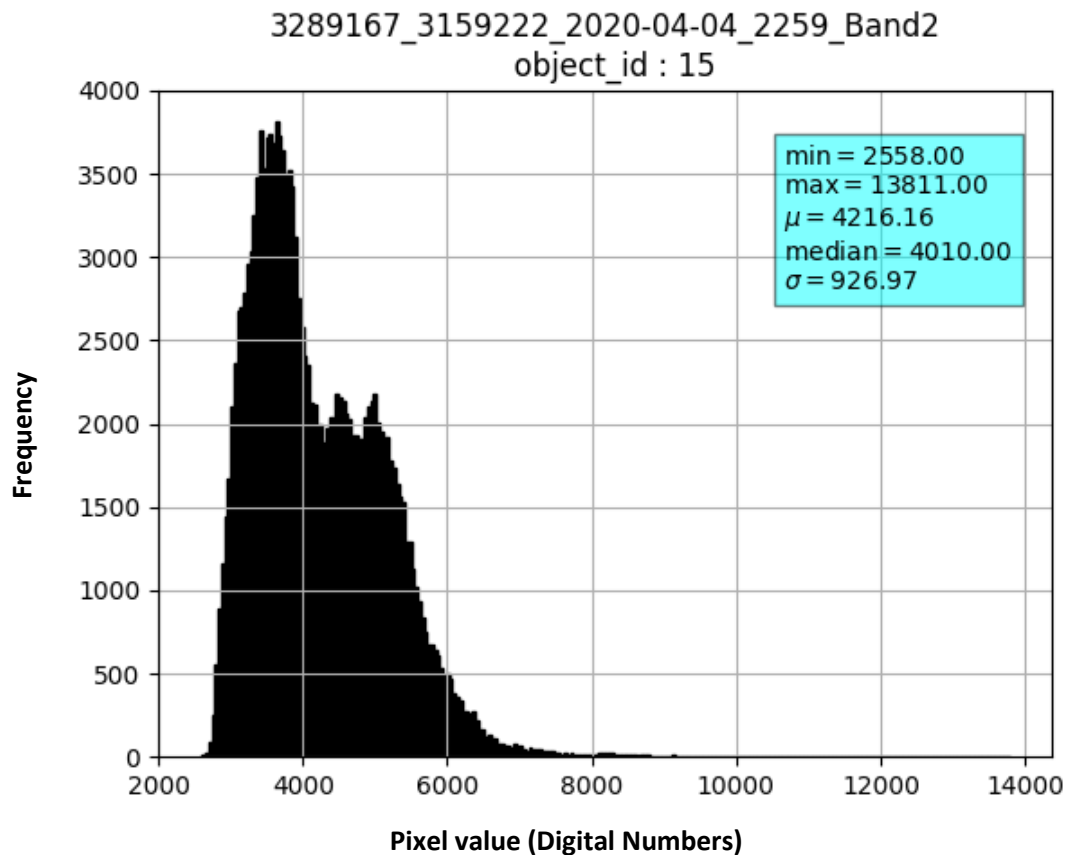
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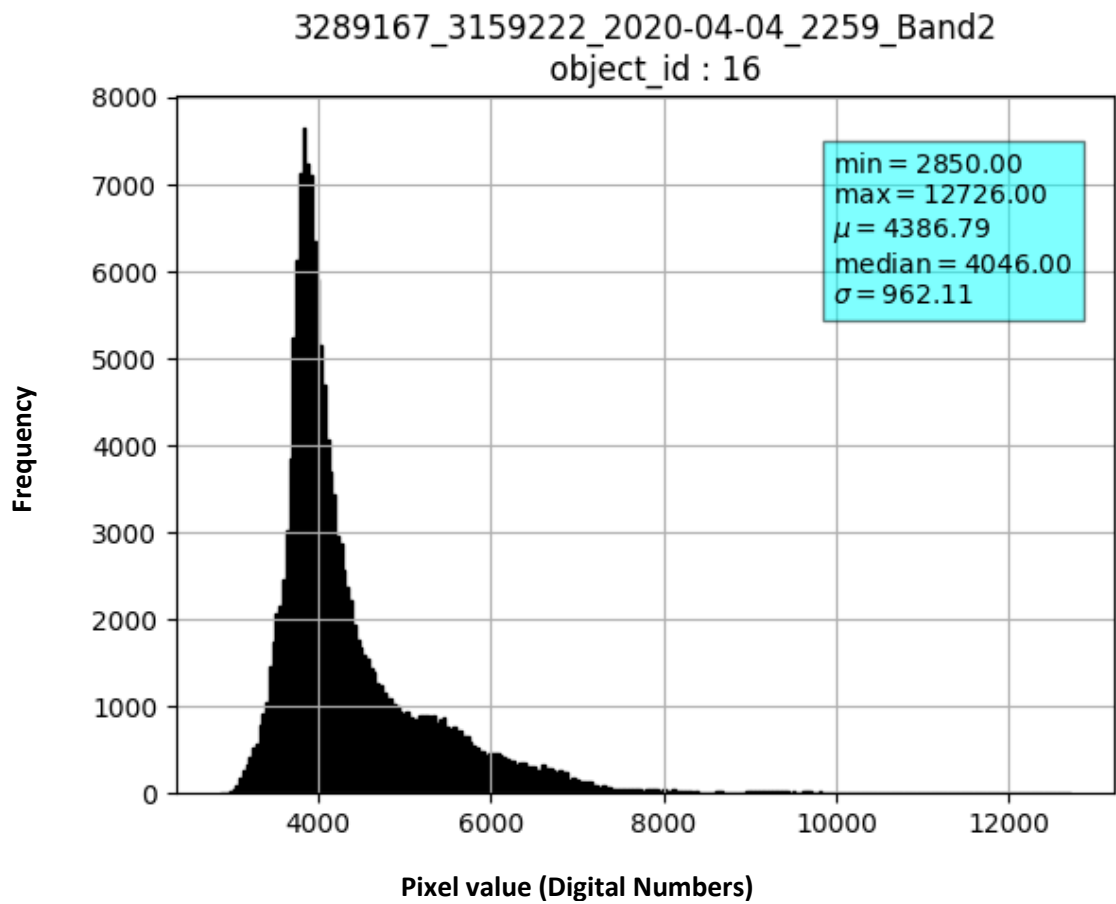
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2.5.2.15



Id 16

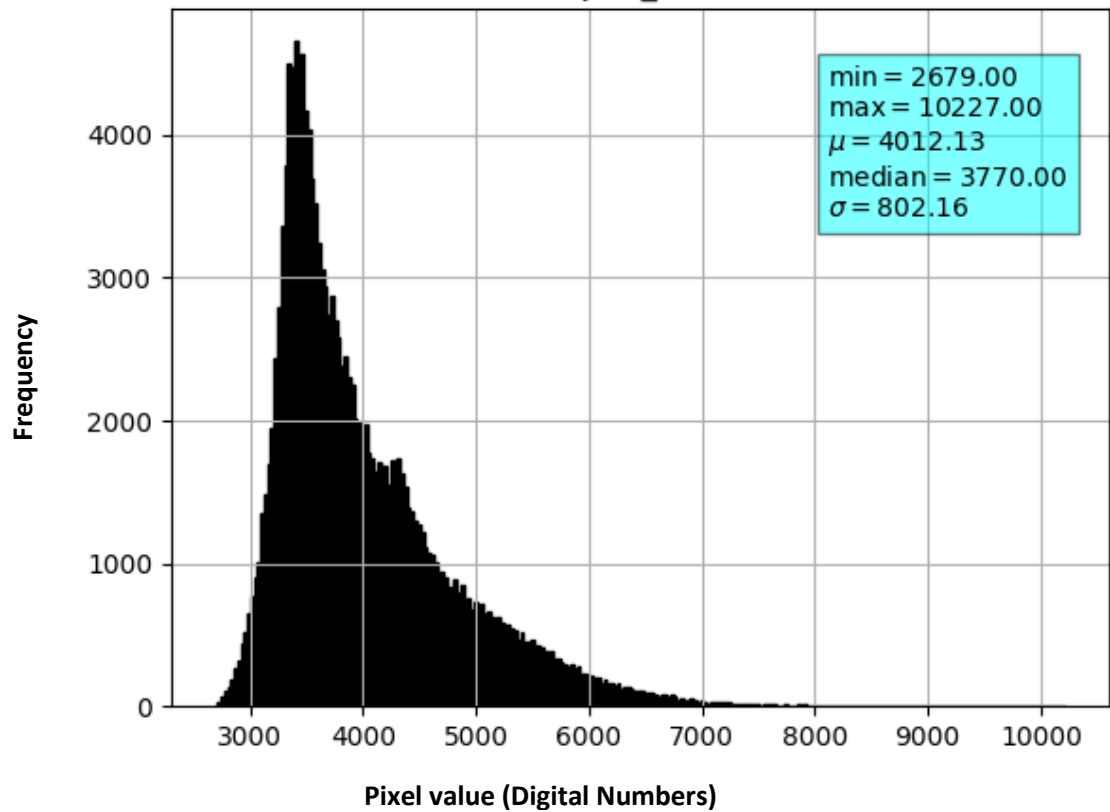
2.5.2.16



Id 17

3289167_3159222_2020-04-04_2259_Band2
object_id : 17

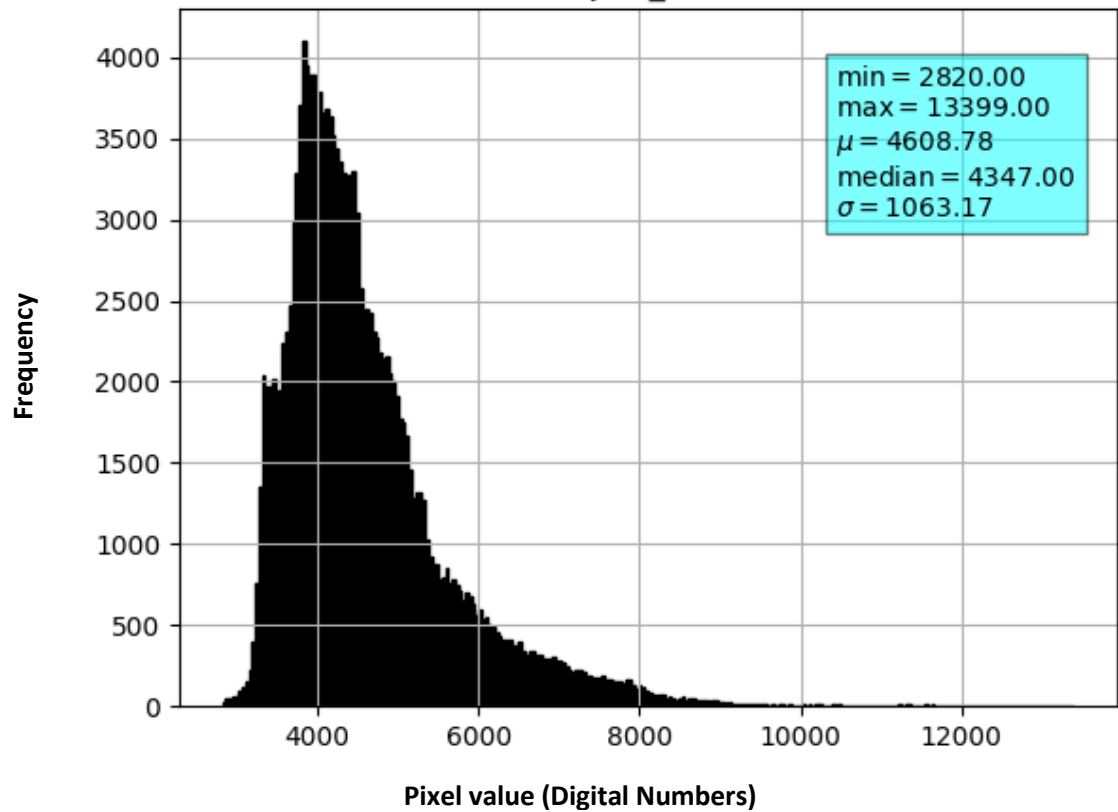
2.5.2.17



Id 18

3289167_3159222_2020-04-04_2259_Band2
object_id : 18

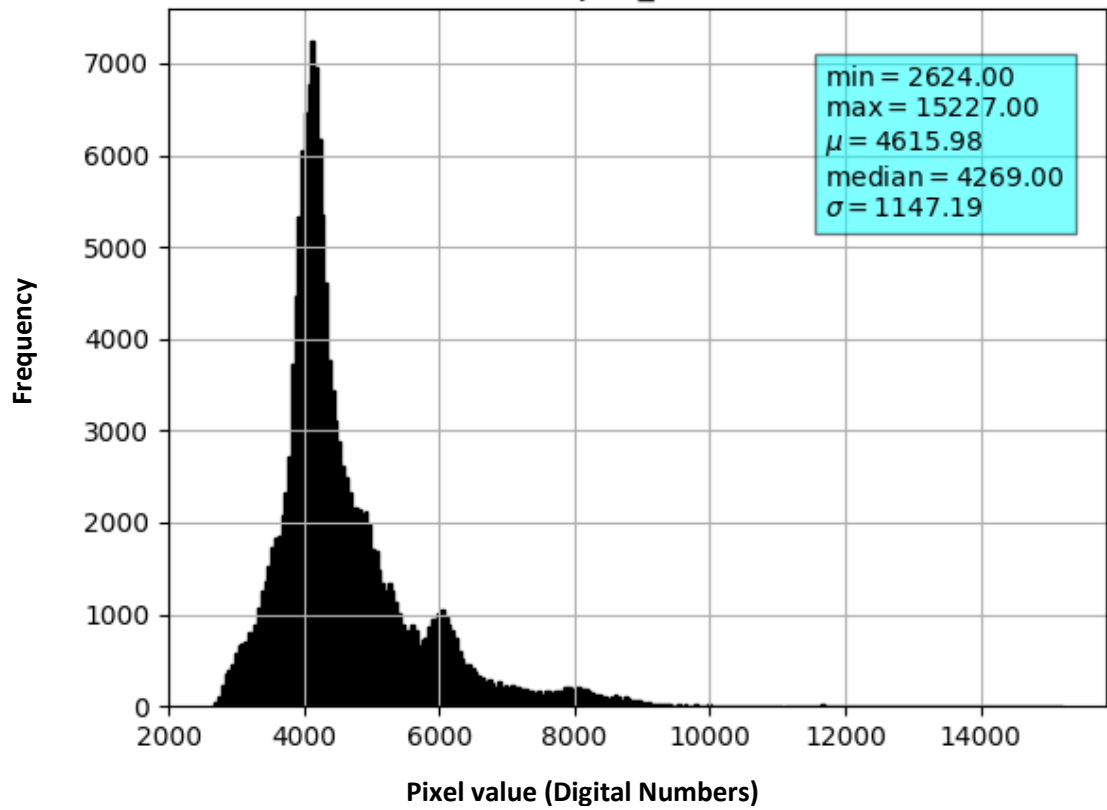
2.5.2.18



Id 19

3289167_3159222_2020-04-04_2259_Band2
object_id : 19

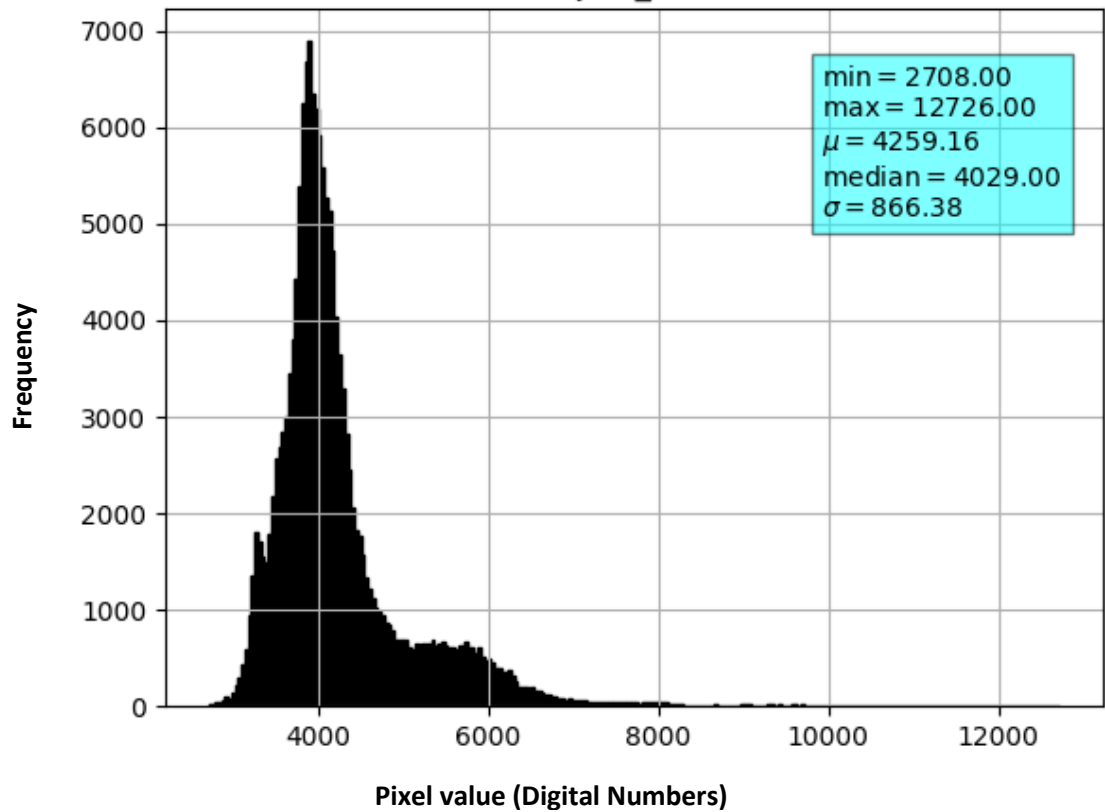
2.5.2.19



Id 20

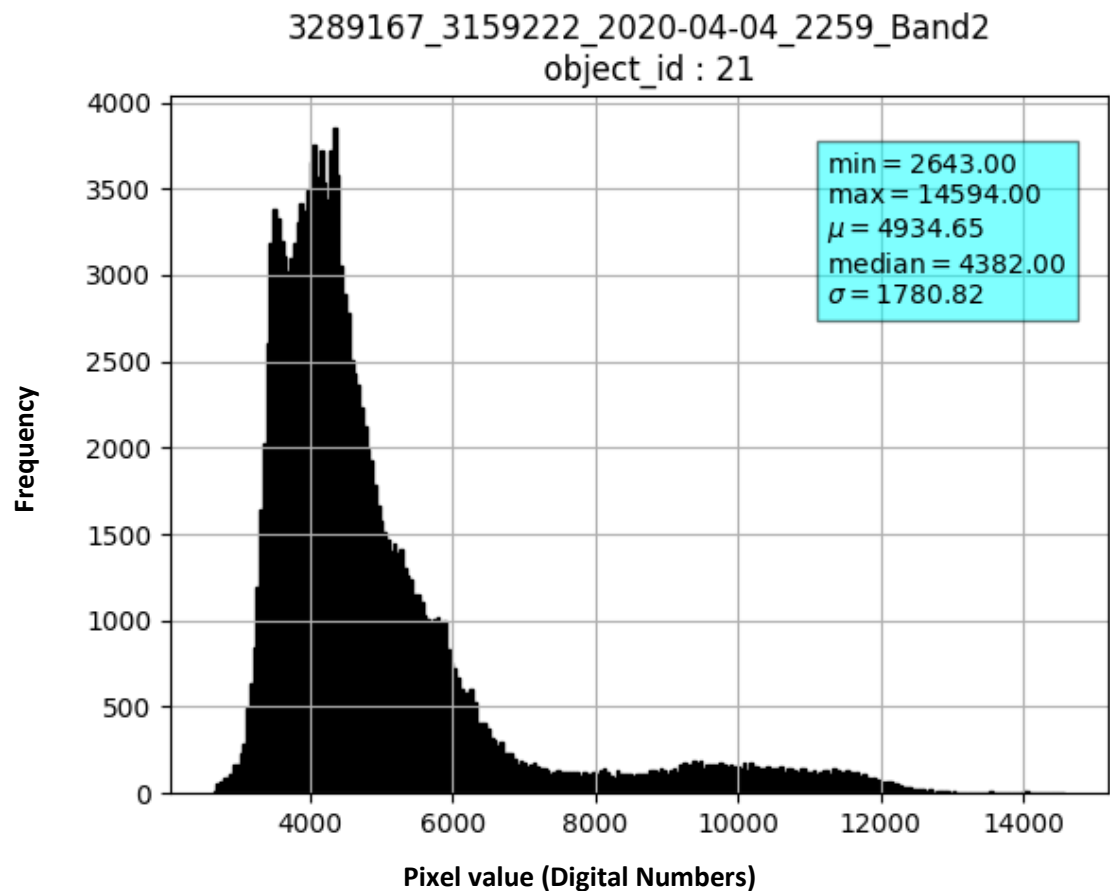
3289167_3159222_2020-04-04_2259_Band2
object_id : 20

2.5.2.20



Id 21

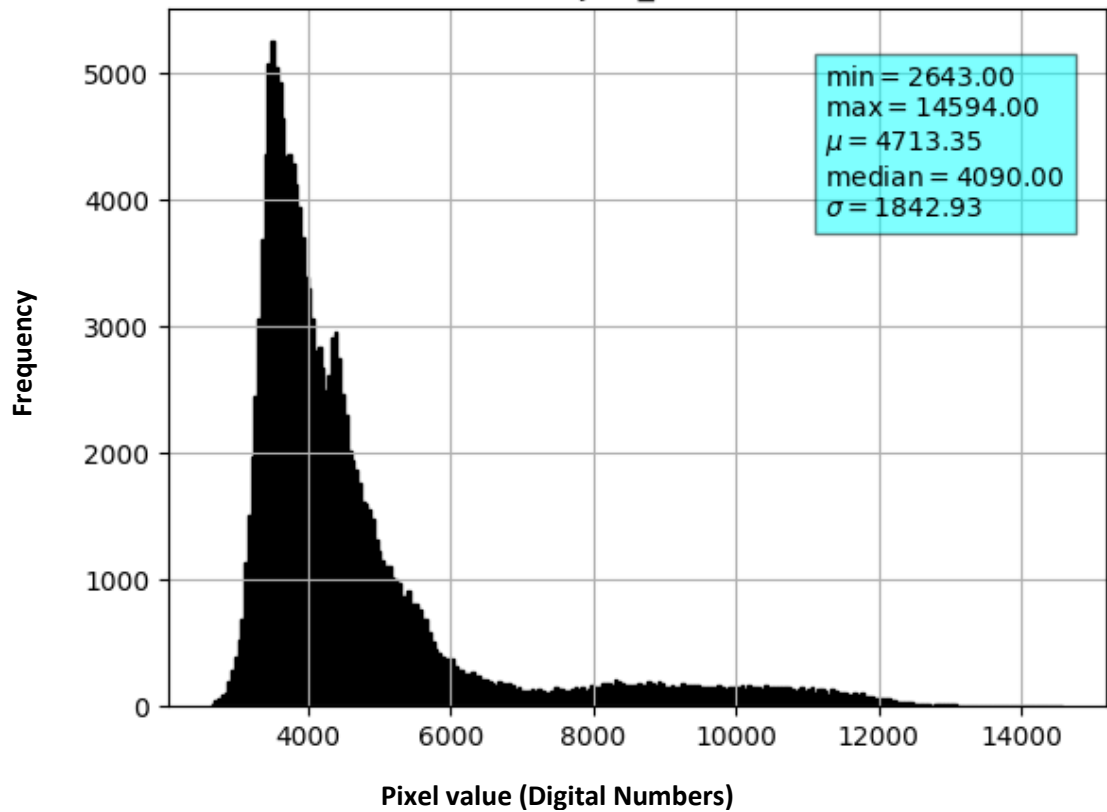
2.5.2.21



Id 22

3289167_3159222_2020-04-04_2259_Band2
object_id : 22

2.5.2.22

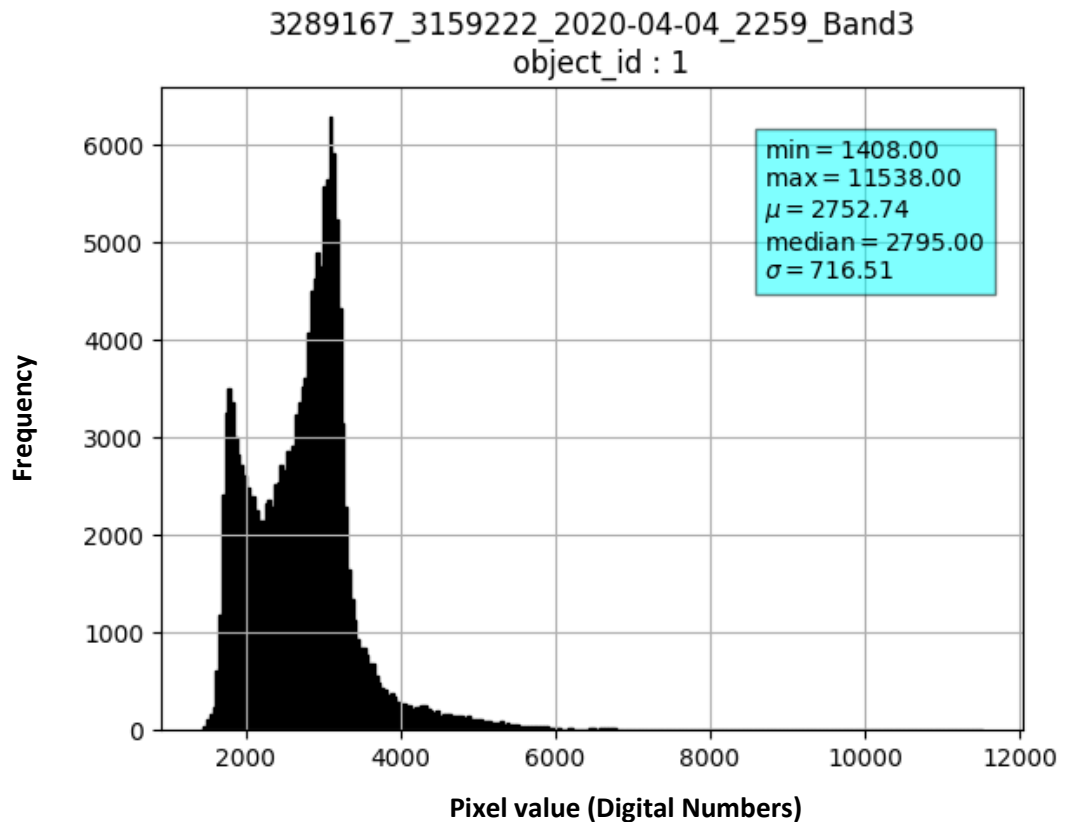


SuperDove – Red Band (Band 3)

Id 01

2.5.3

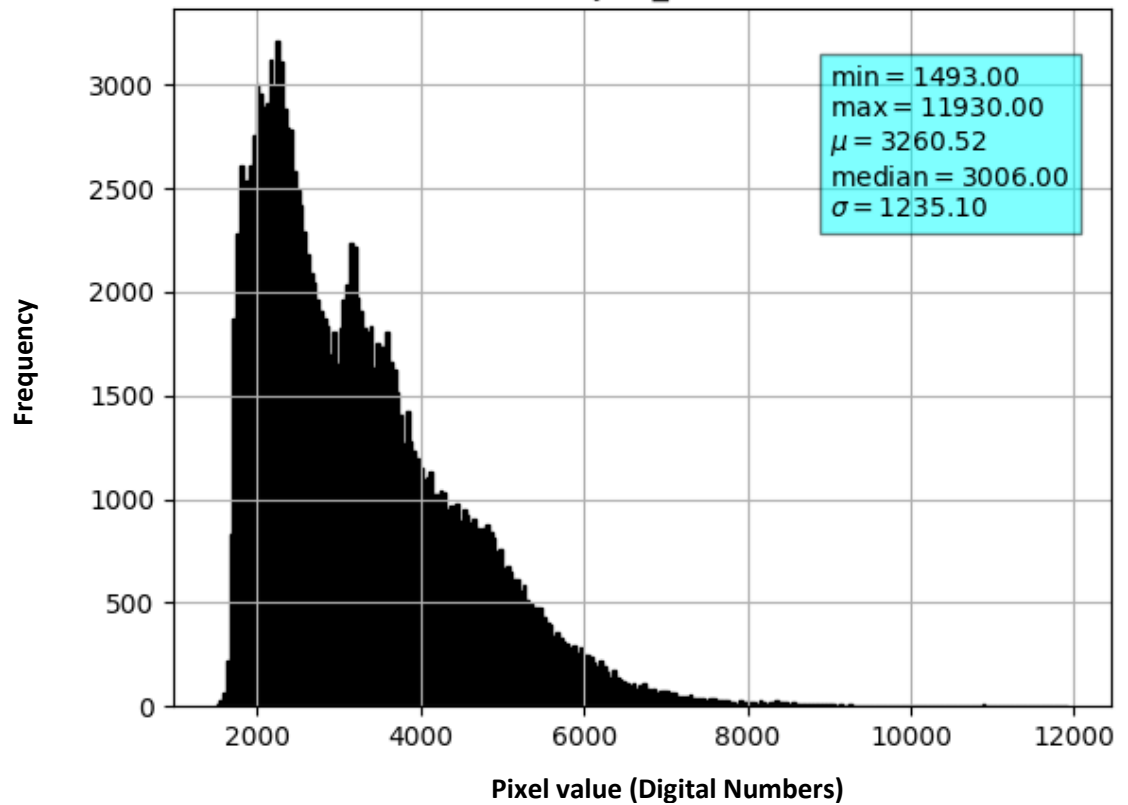
2.5.3.1



Id 02

3289167_3159222_2020-04-04_2259_Band3
object_id : 2

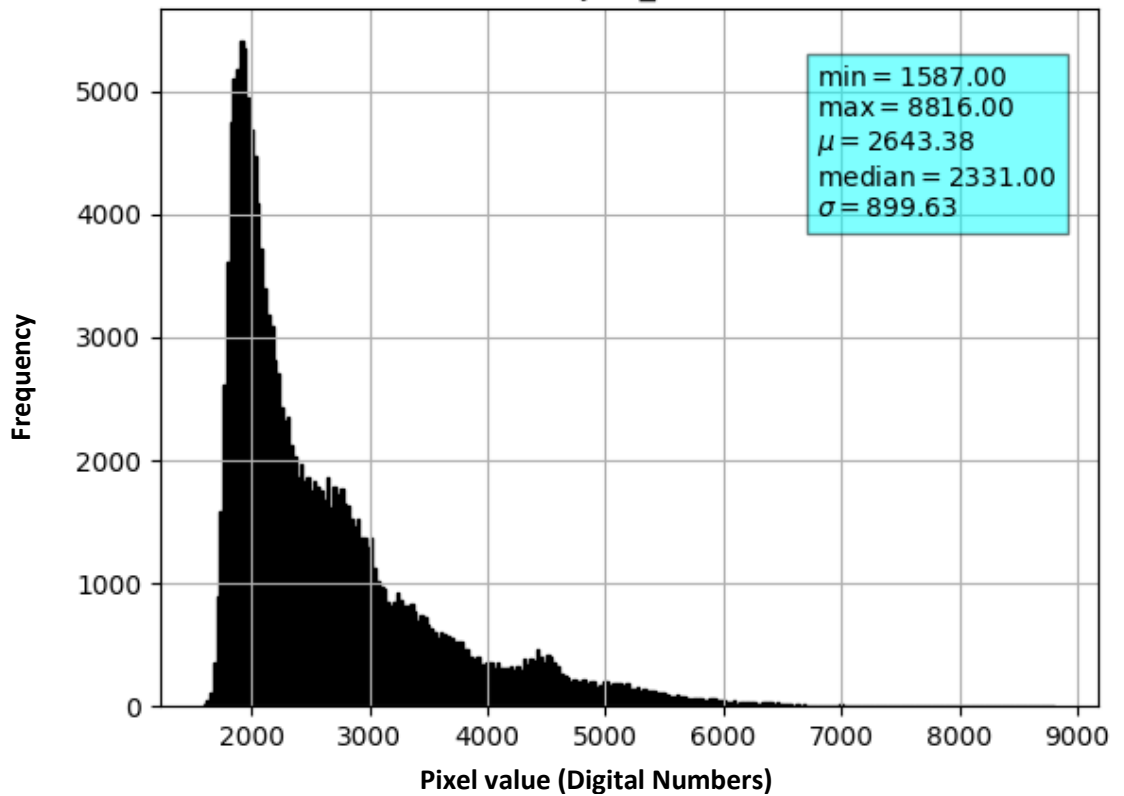
2.5.3.2



Id 03

3289167_3159222_2020-04-04_2259_Band3
object_id : 3

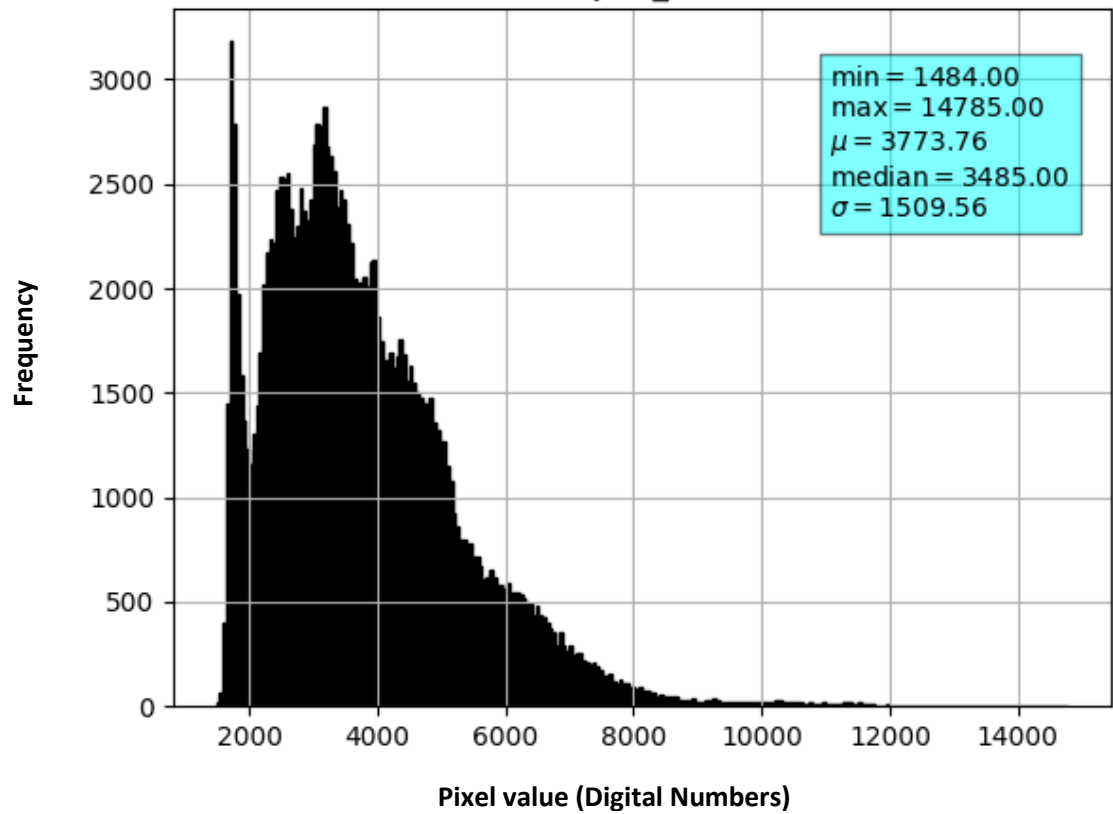
2.5.3.3



Id 04

3289167_3159222_2020-04-04_2259_Band3
object_id : 4

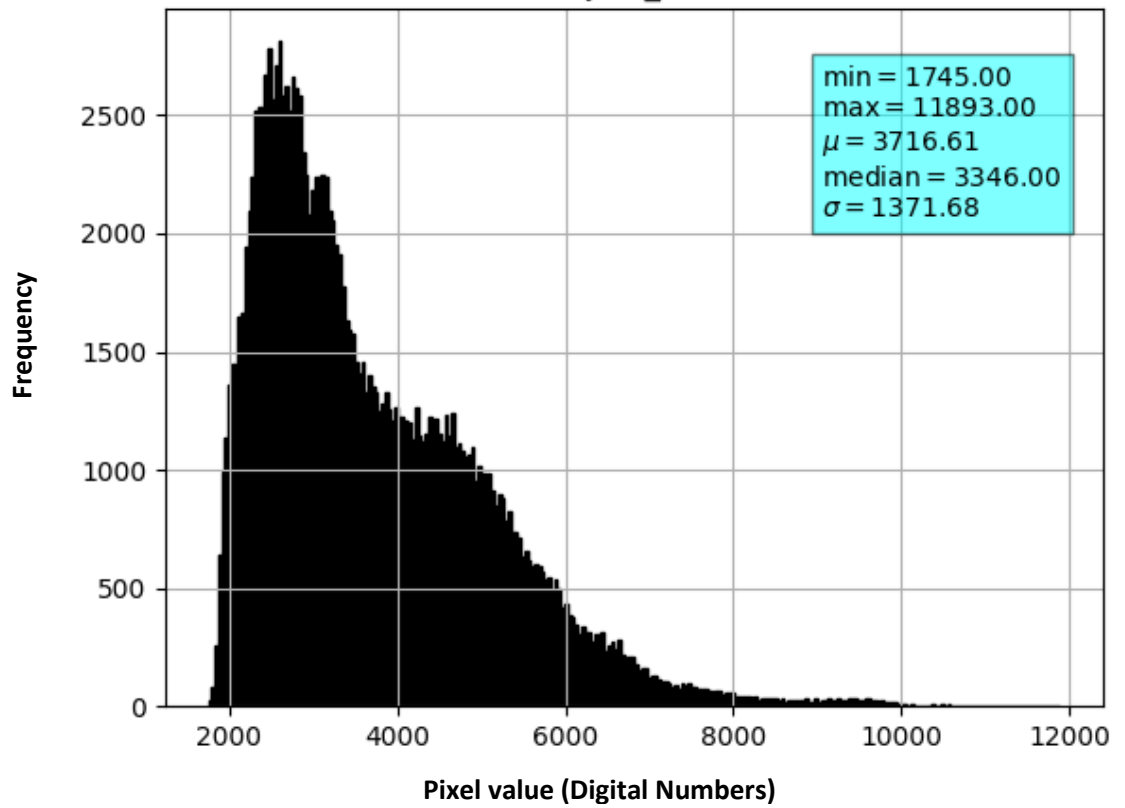
2.5.3.4



Id 05

3289167_3159222_2020-04-04_2259_Band3
object_id : 5

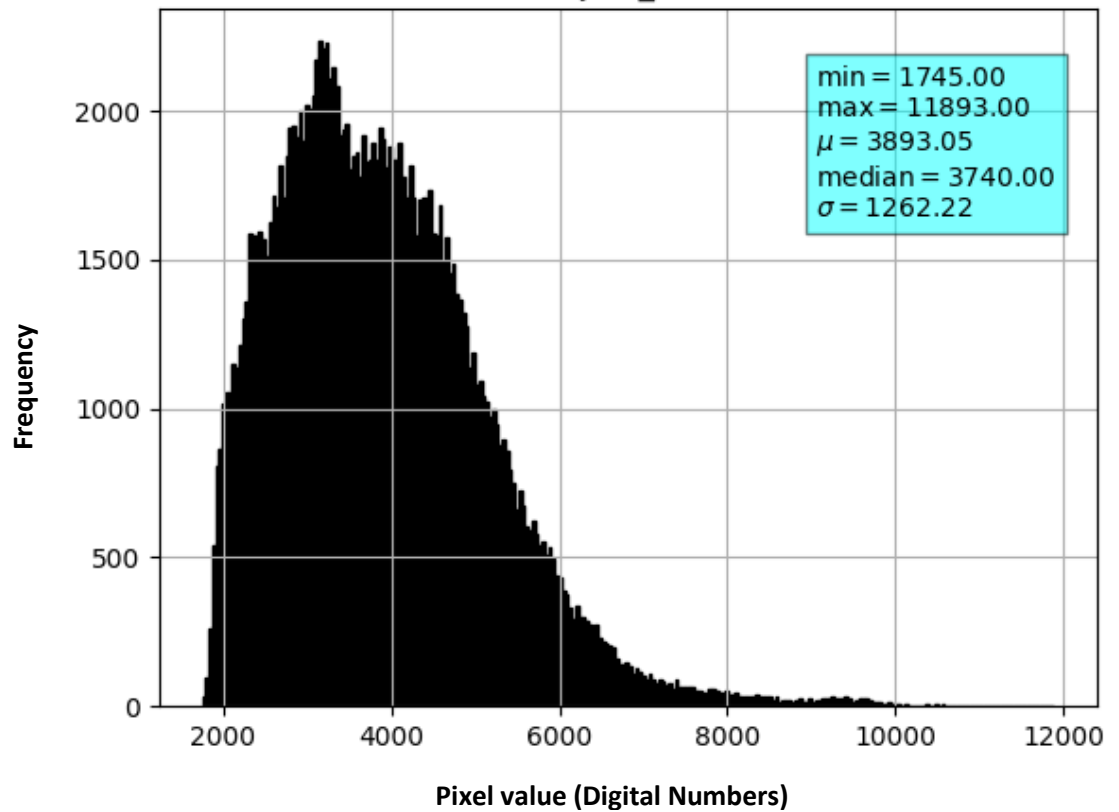
2.5.3.5



Id 06

3289167_3159222_2020-04-04_2259_Band3
object_id : 6

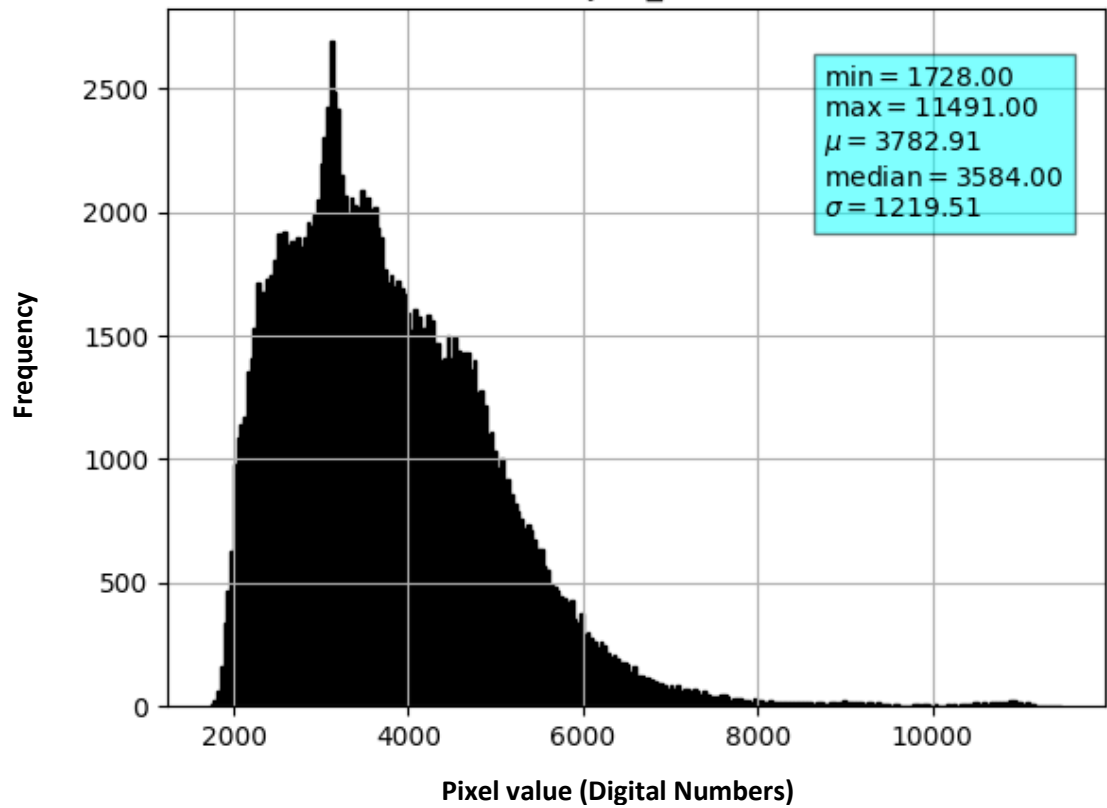
2.5.3.6



Id 07

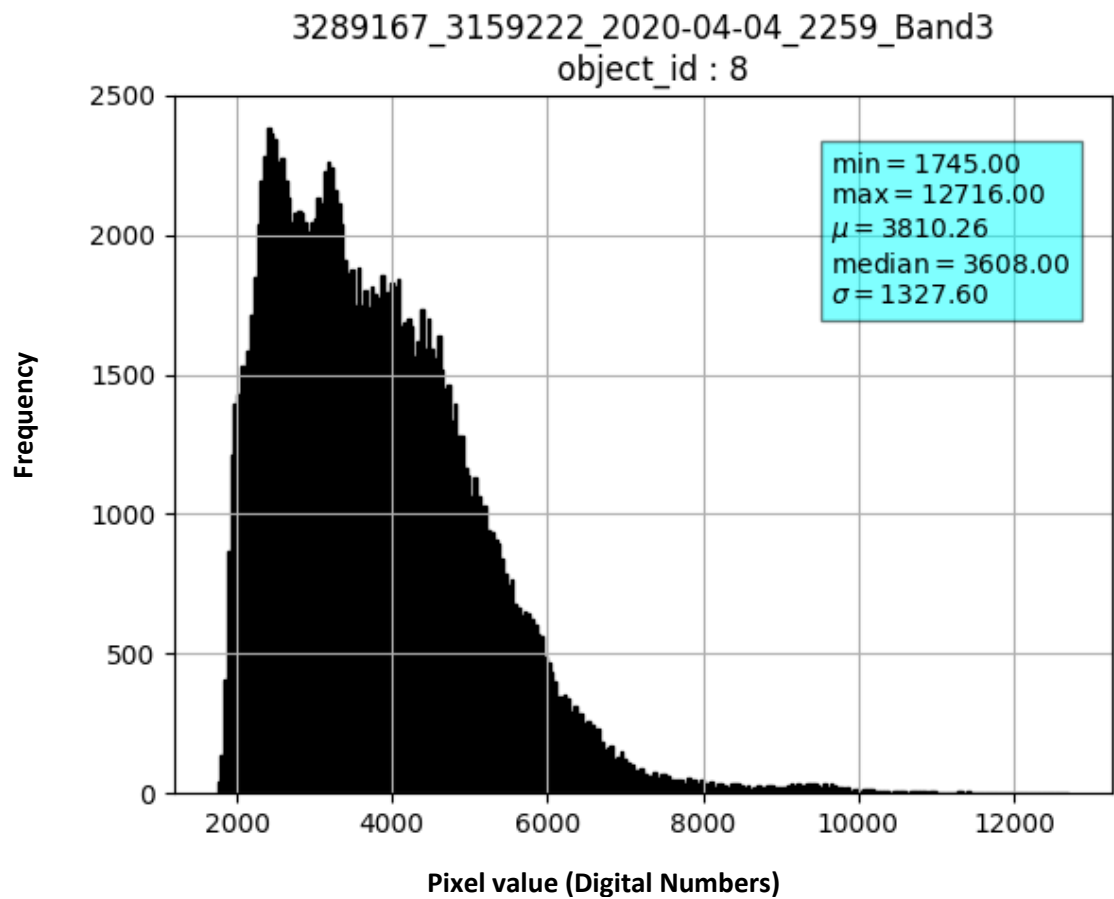
3289167_3159222_2020-04-04_2259_Band3
object_id : 7

2.5.3.7



Id 08

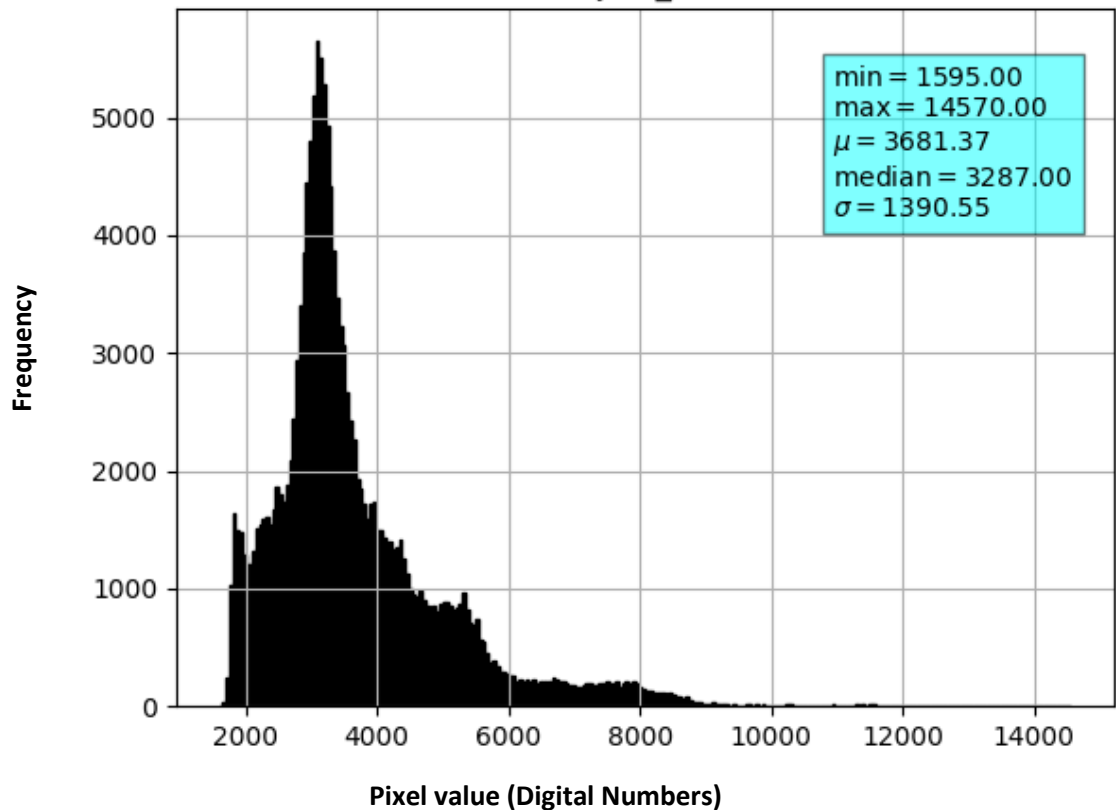
2.5.3.8



Id 09

3289167_3159222_2020-04-04_2259_Band3
object_id : 9

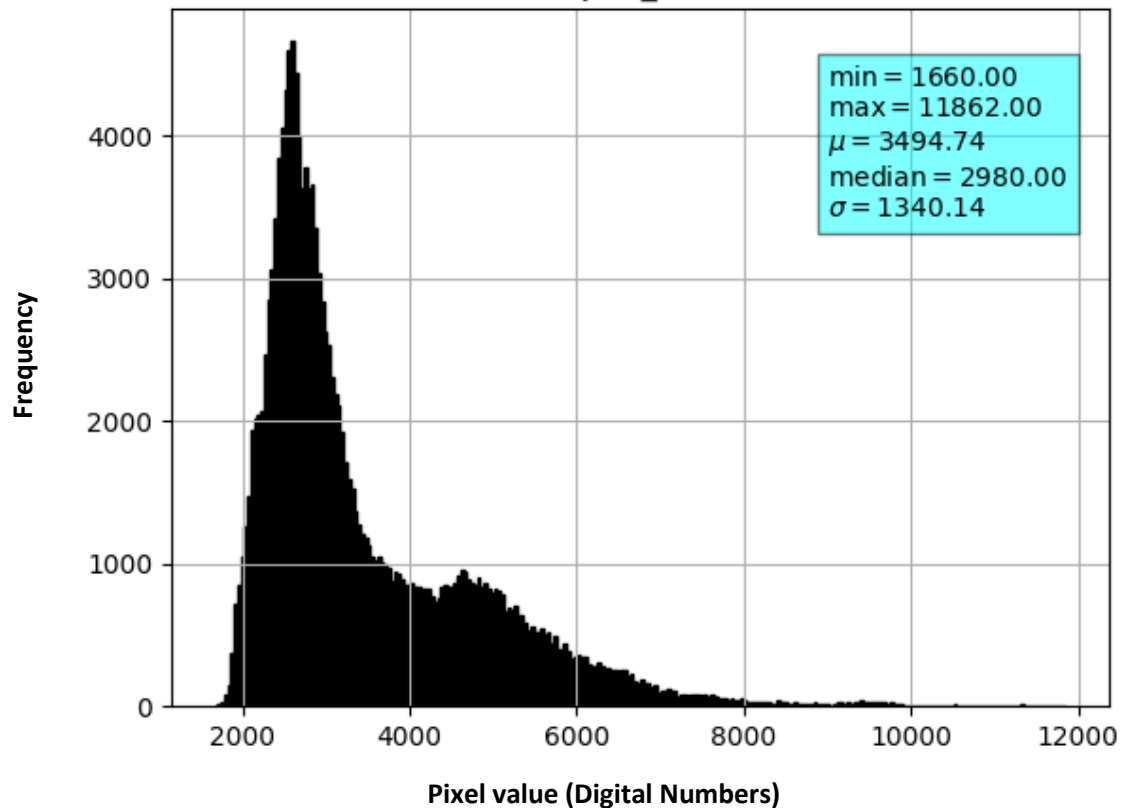
2.5.3.9



Id 10

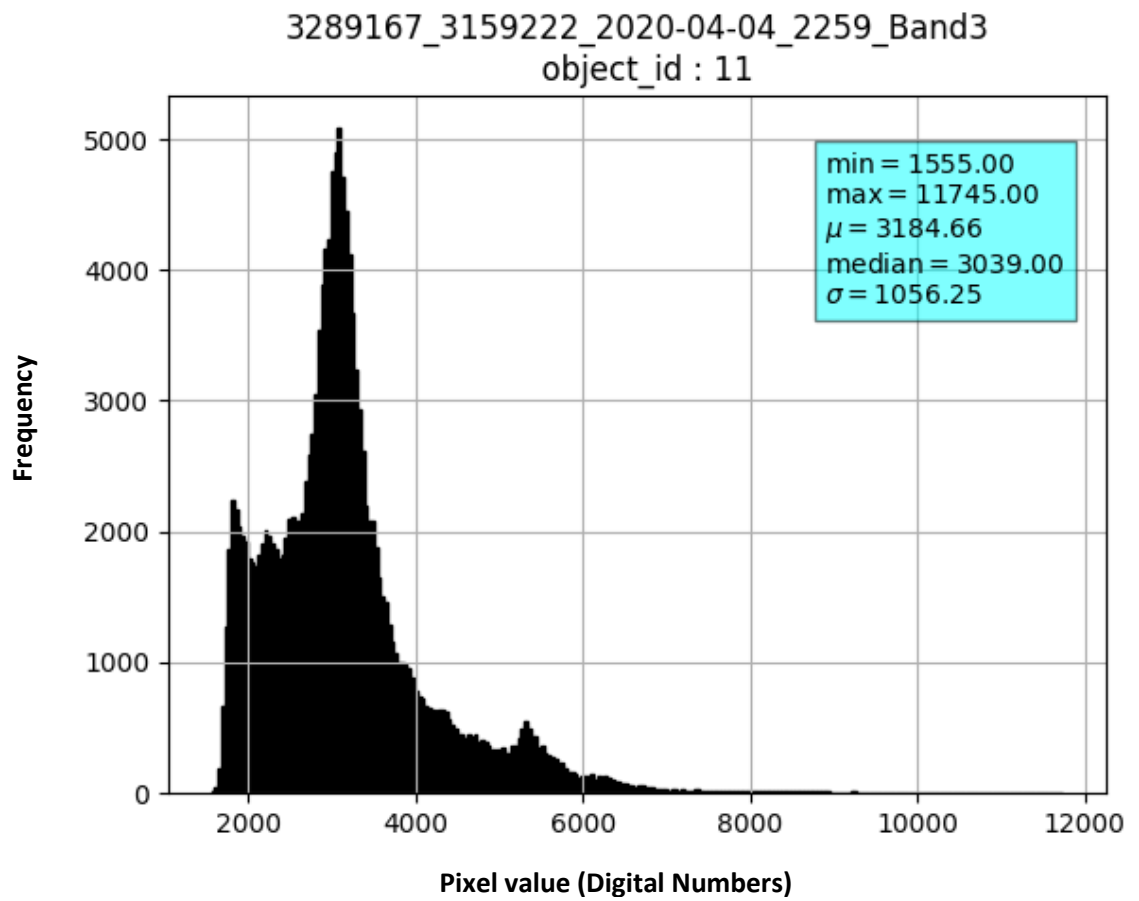
3289167_3159222_2020-04-04_2259_Band3
object_id : 10

2.5.3.10



Id 11

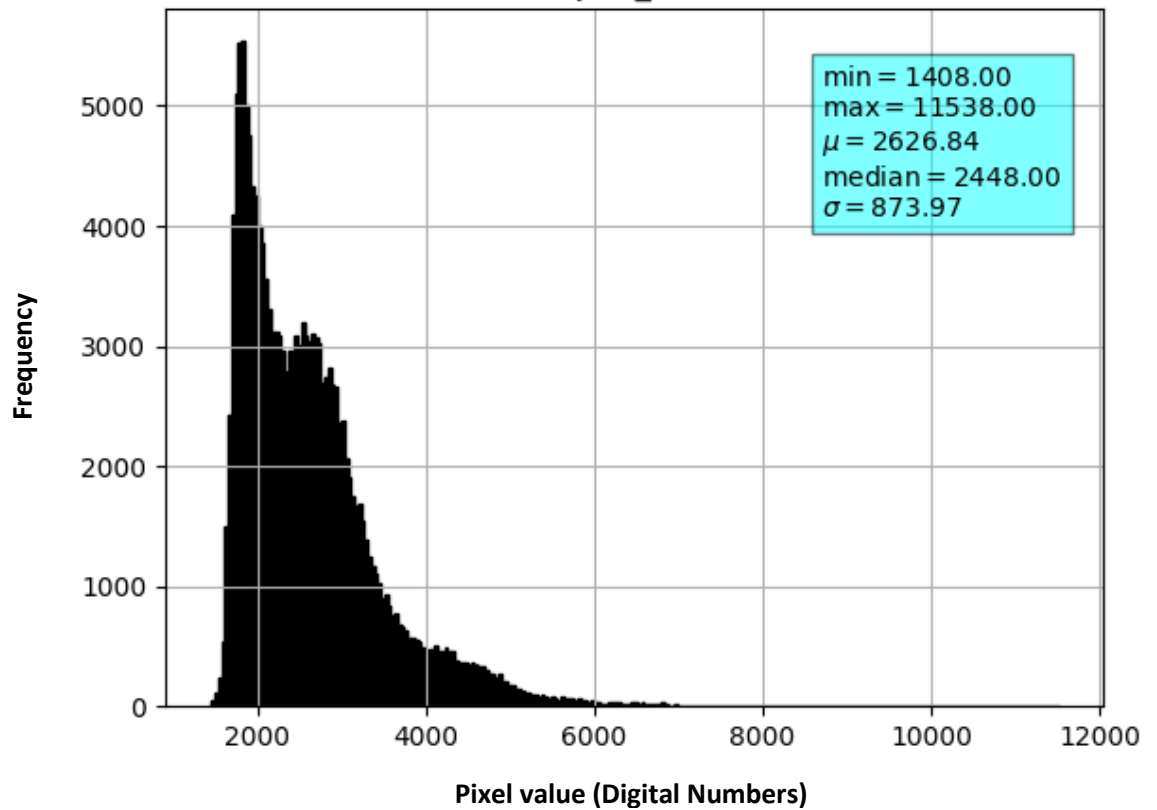
2.5.3.11



Id 12

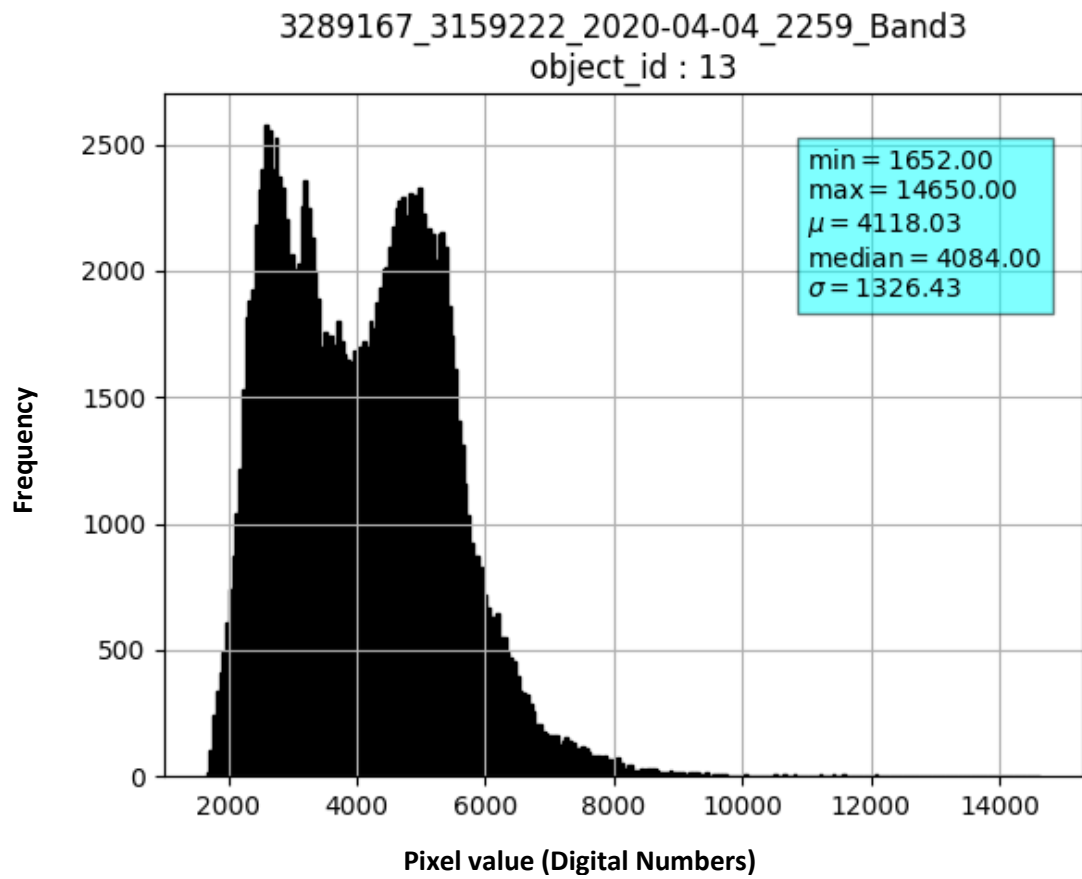
3289167_3159222_2020-04-04_2259_Band3
object_id : 12

2.5.3.12



Id 13

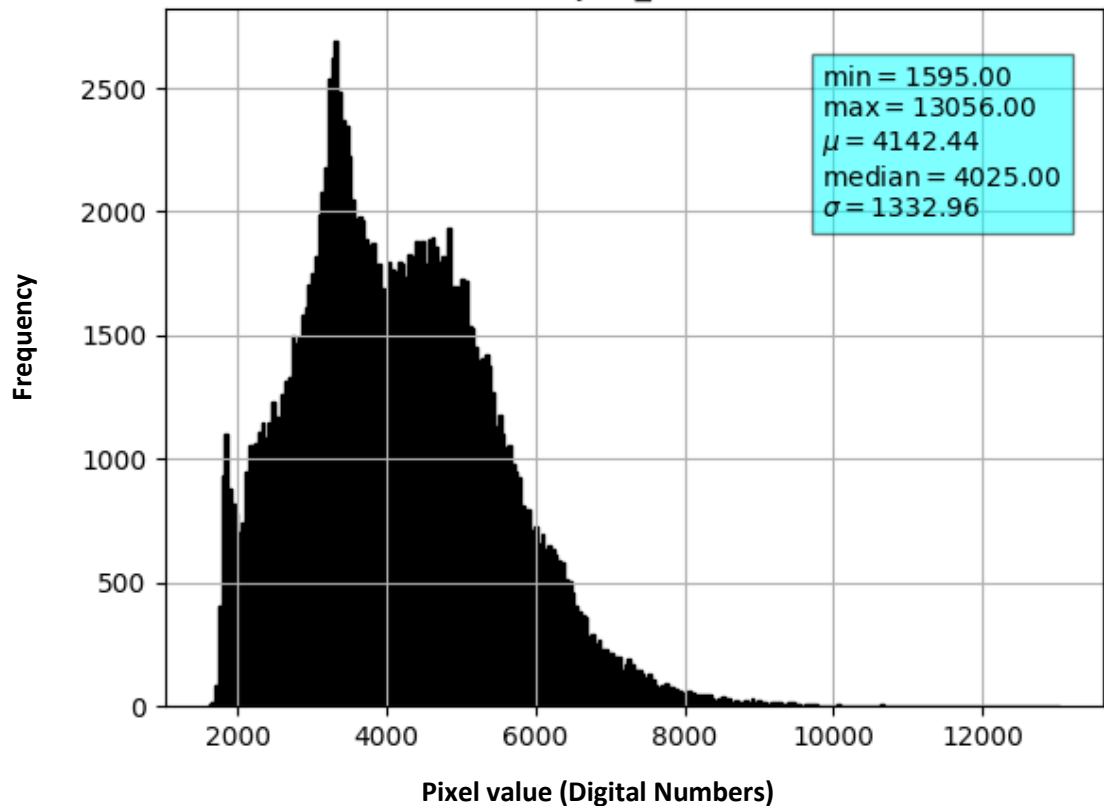
2.5.3.13



Id 14

3289167_3159222_2020-04-04_2259_Band3
object_id : 14

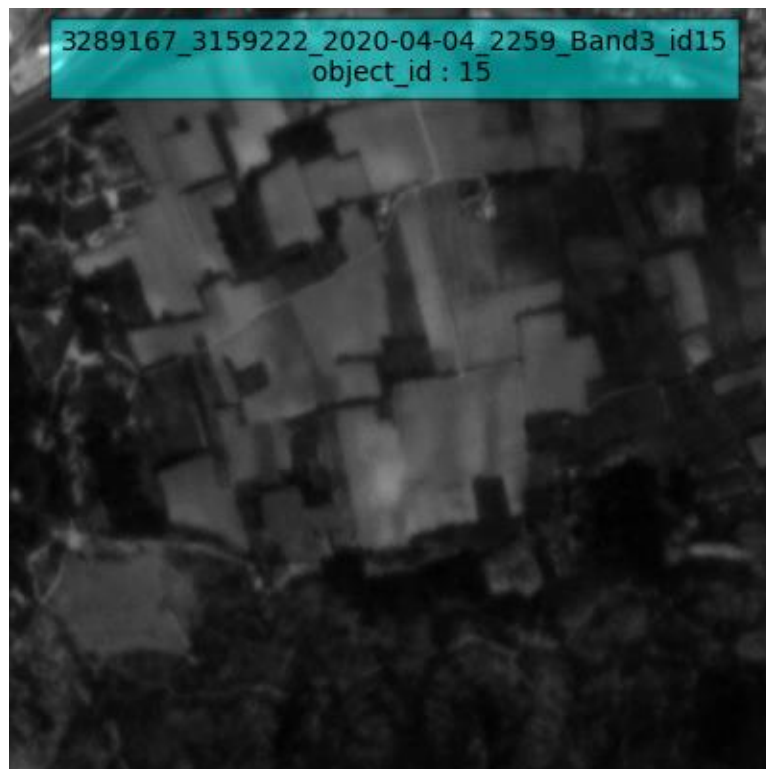
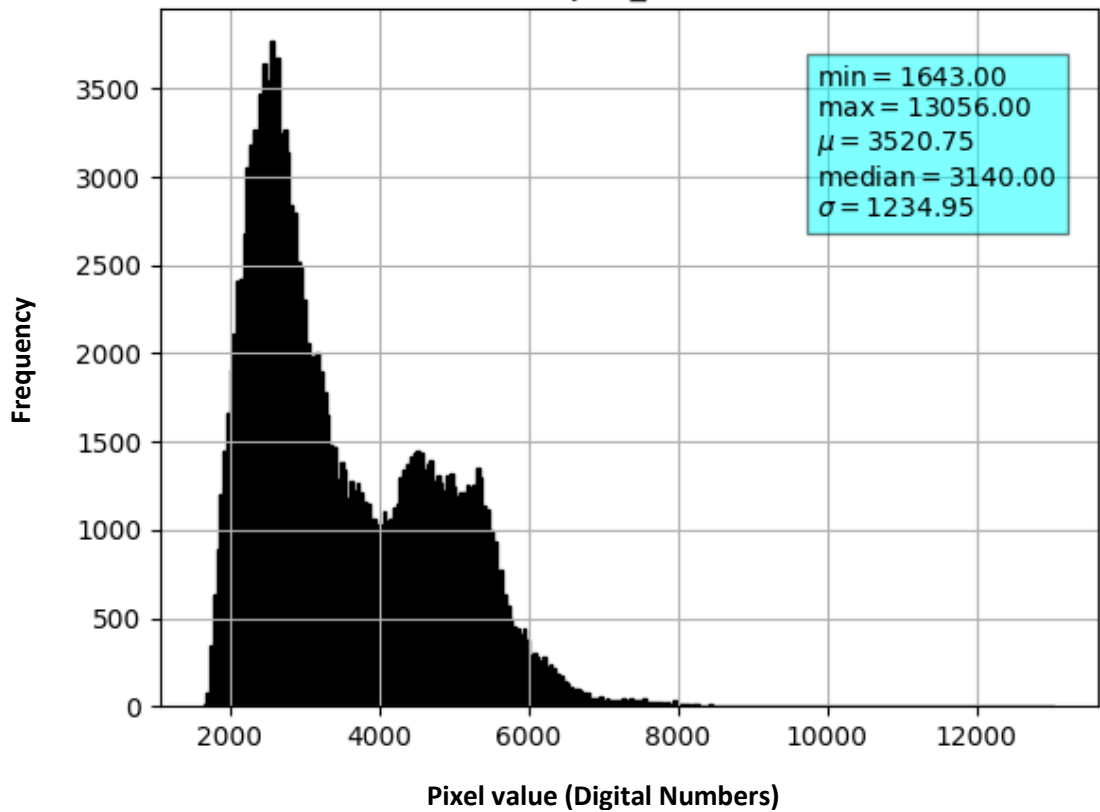
2.5.3.14



Id 15

3289167_3159222_2020-04-04_2259_Band3
object_id : 15

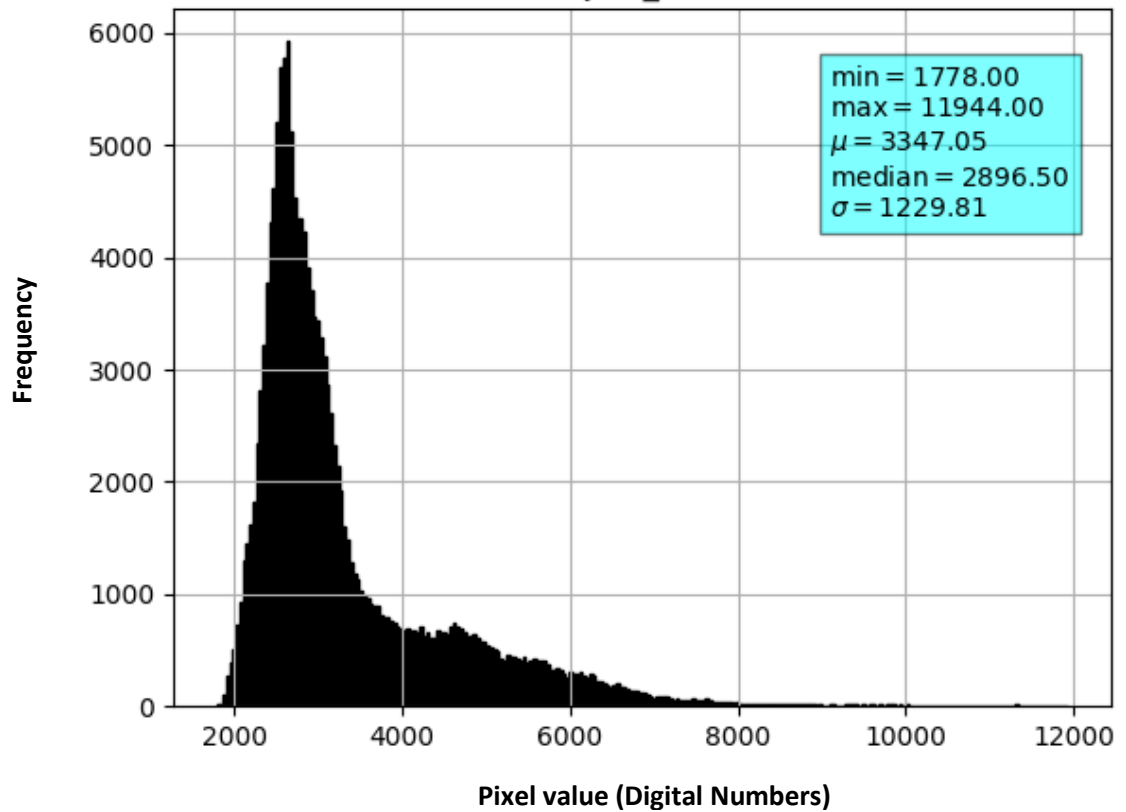
2.5.3.15



Id 16

2.5.3.16

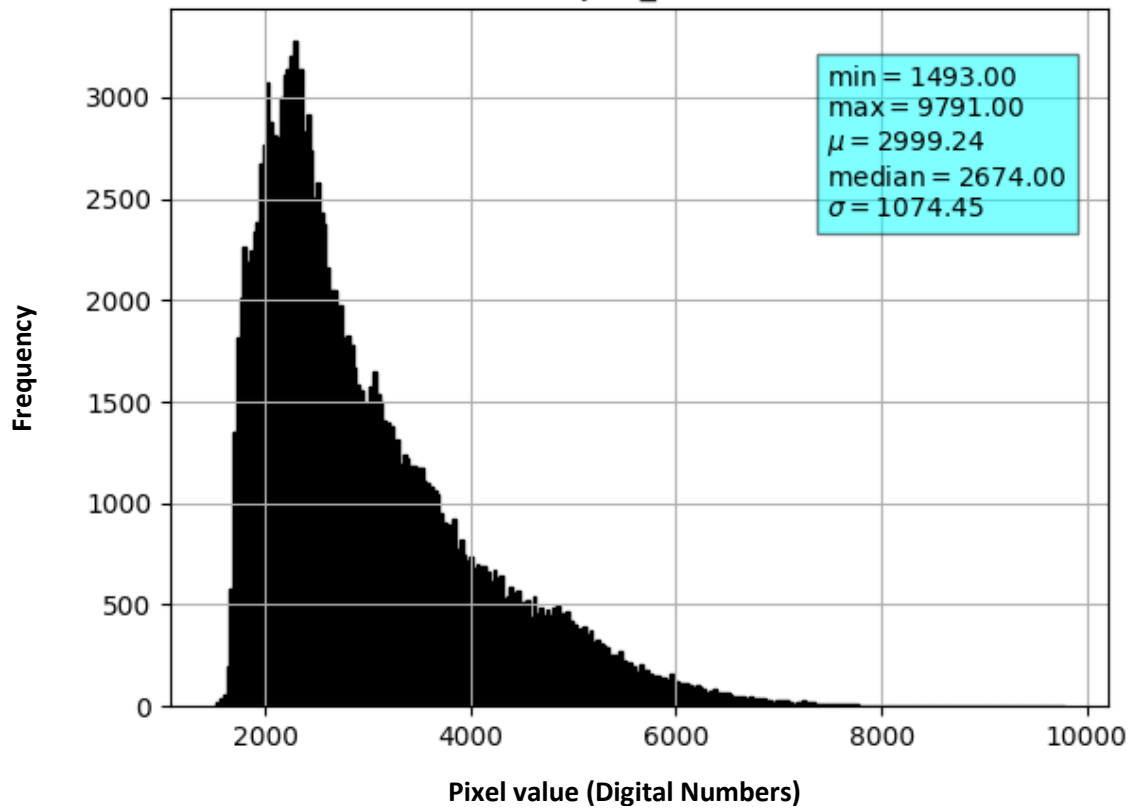
3289167_3159222_2020-04-04_2259_Band3
object_id : 16



Id 17

3289167_3159222_2020-04-04_2259_Band3
object_id : 17

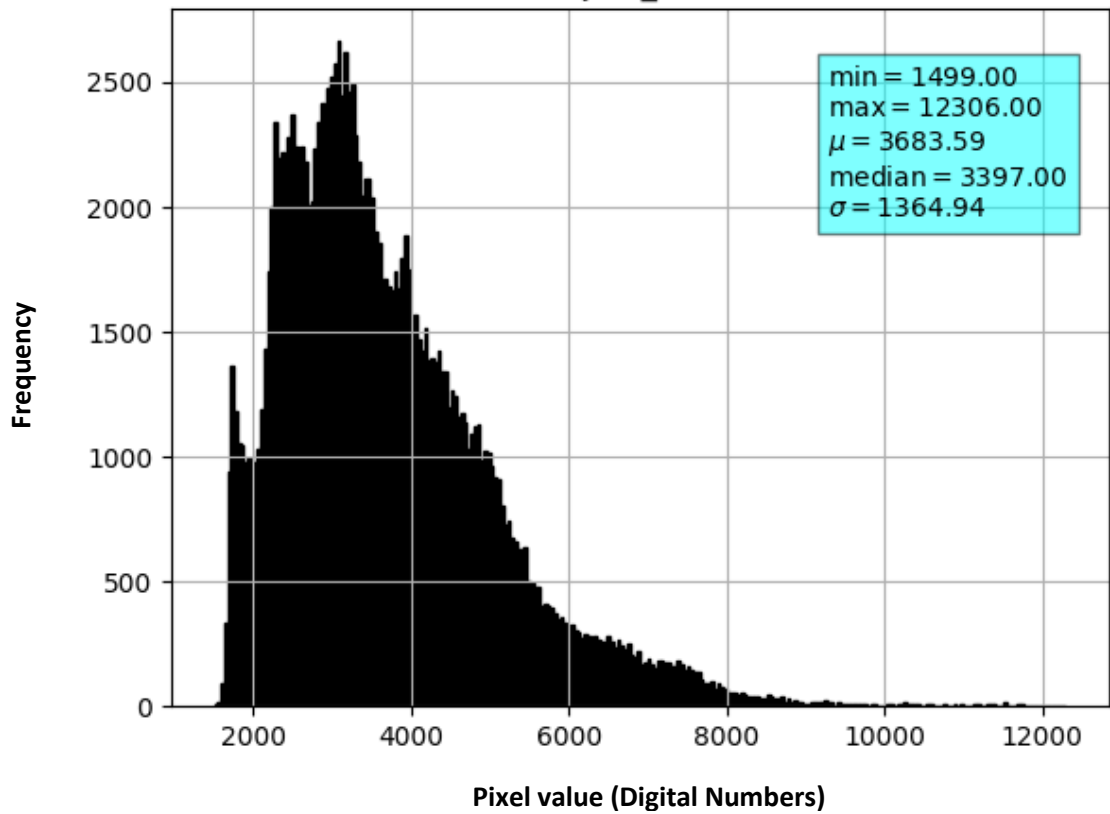
2.5.3.17



Id 18

3289167_3159222_2020-04-04_2259_Band3
object_id : 18

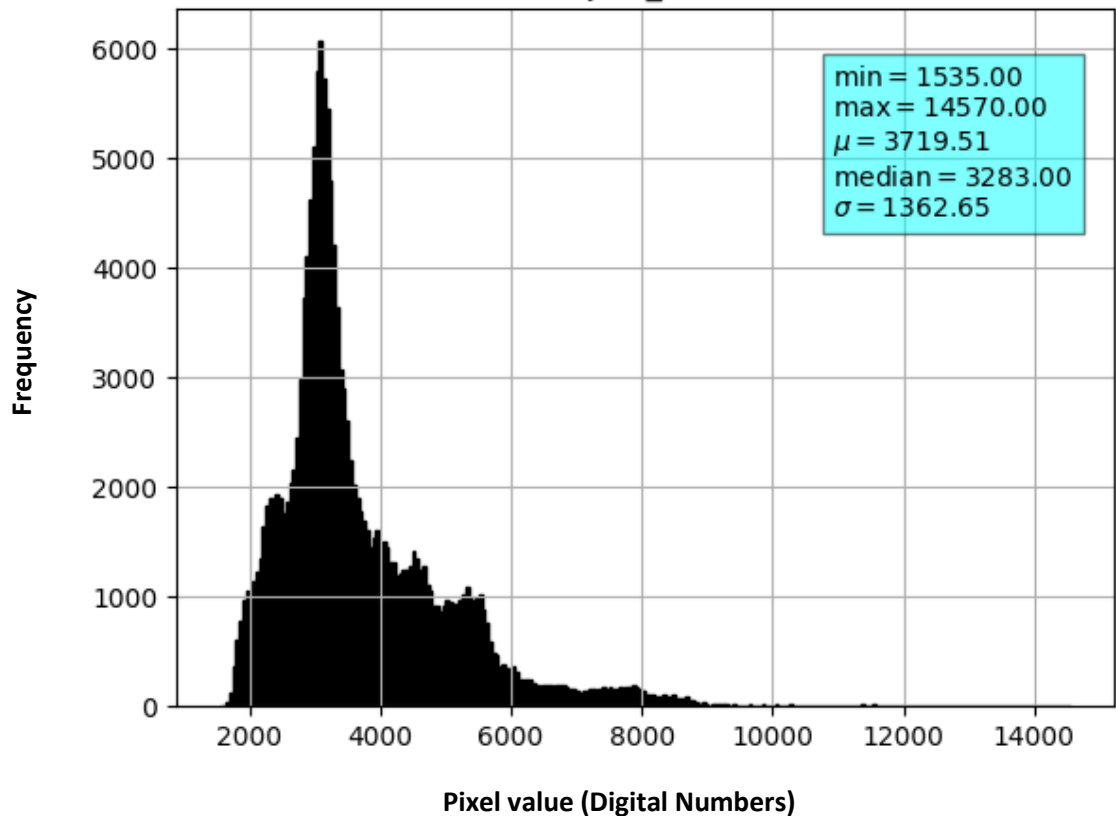
2.5.3.18



Id 19

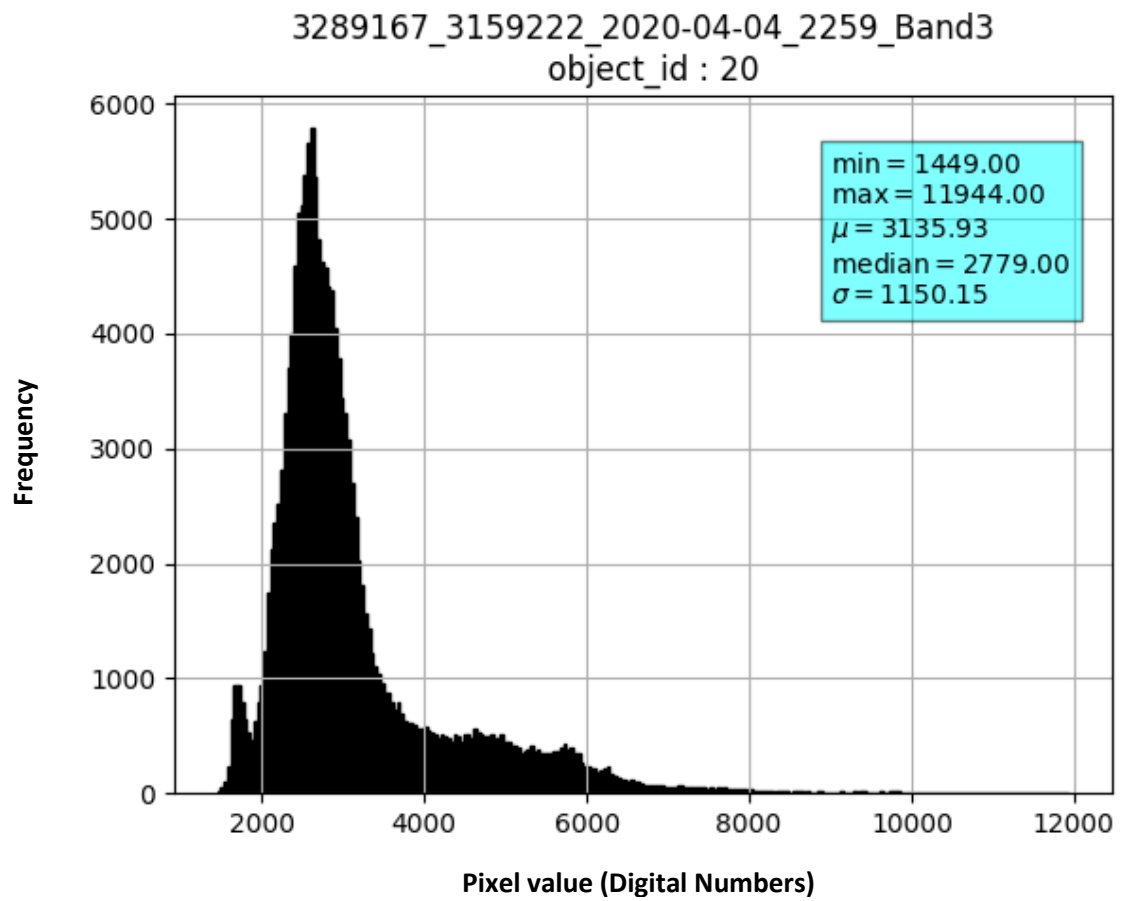
2.5.3.19

3289167_3159222_2020-04-04_2259_Band3
object_id : 19



Id 20

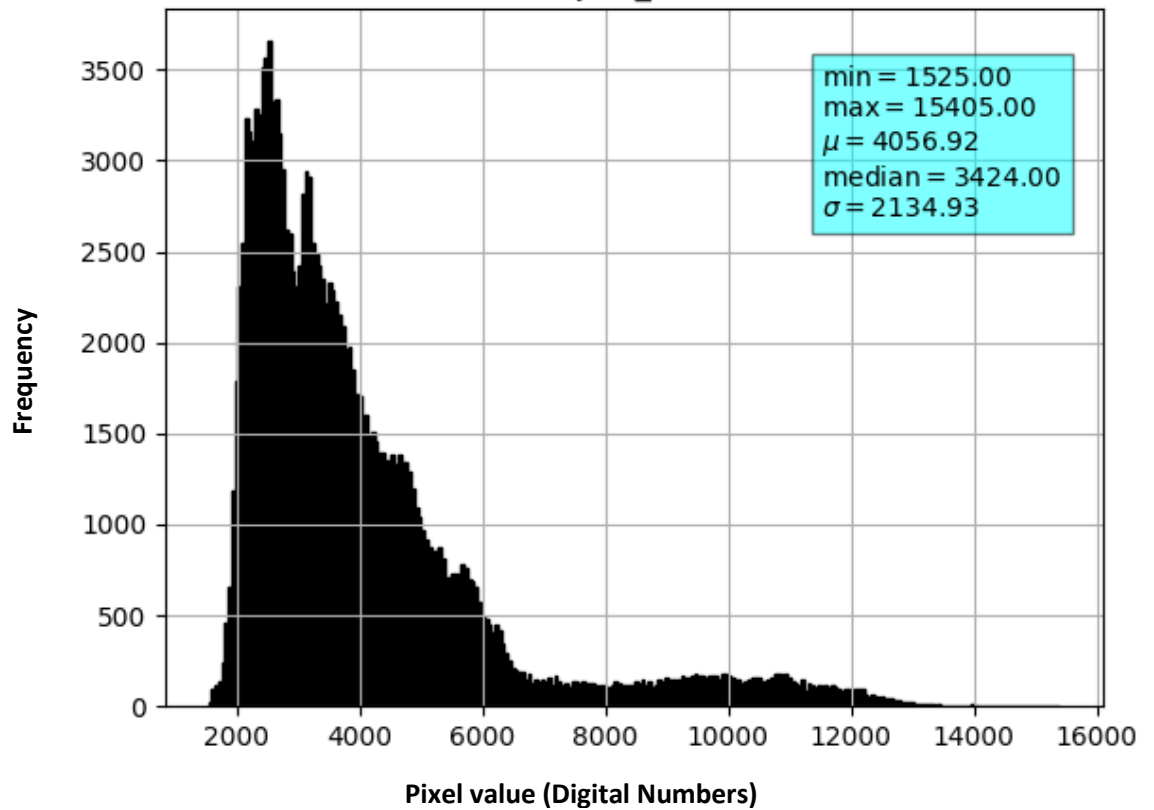
2.5.3.20



Id 21

3289167_3159222_2020-04-04_2259_Band3
object_id : 21

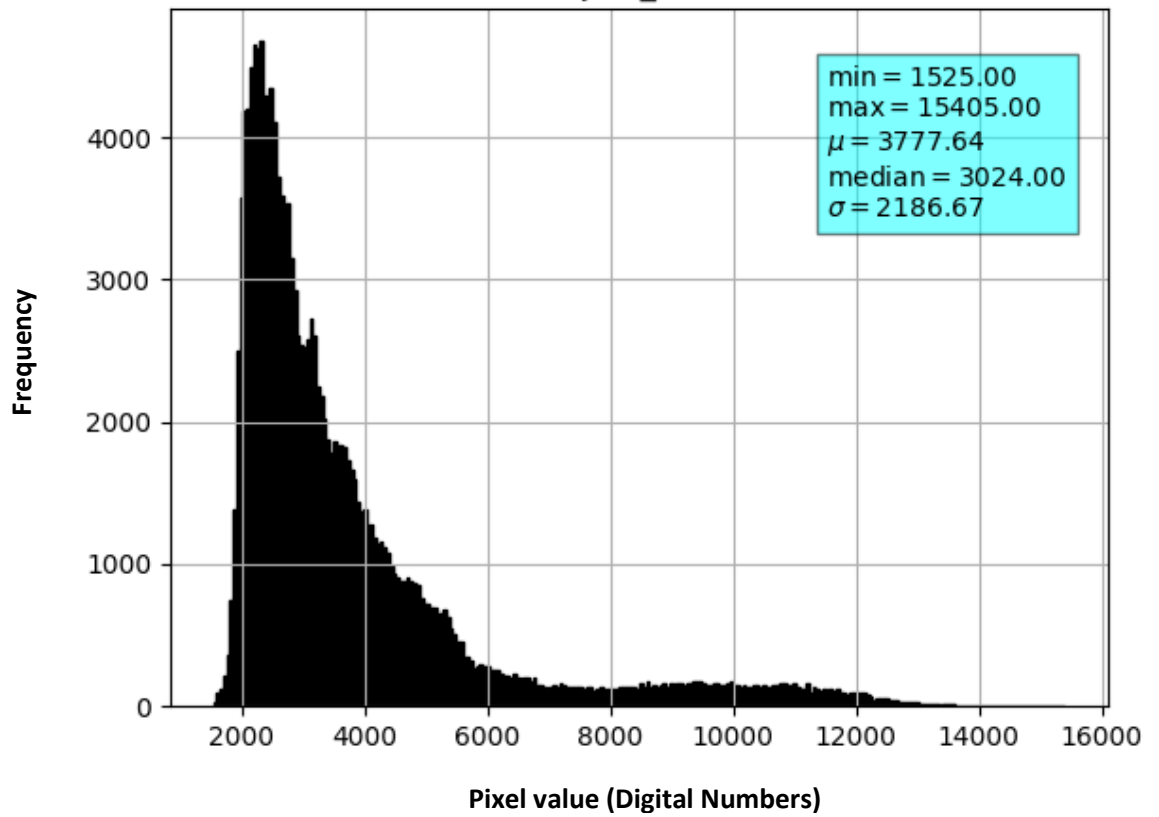
2.5.3.21



Id 22

3289167_3159222_2020-04-04_2259_Band3
object_id : 22

2.5.3.22

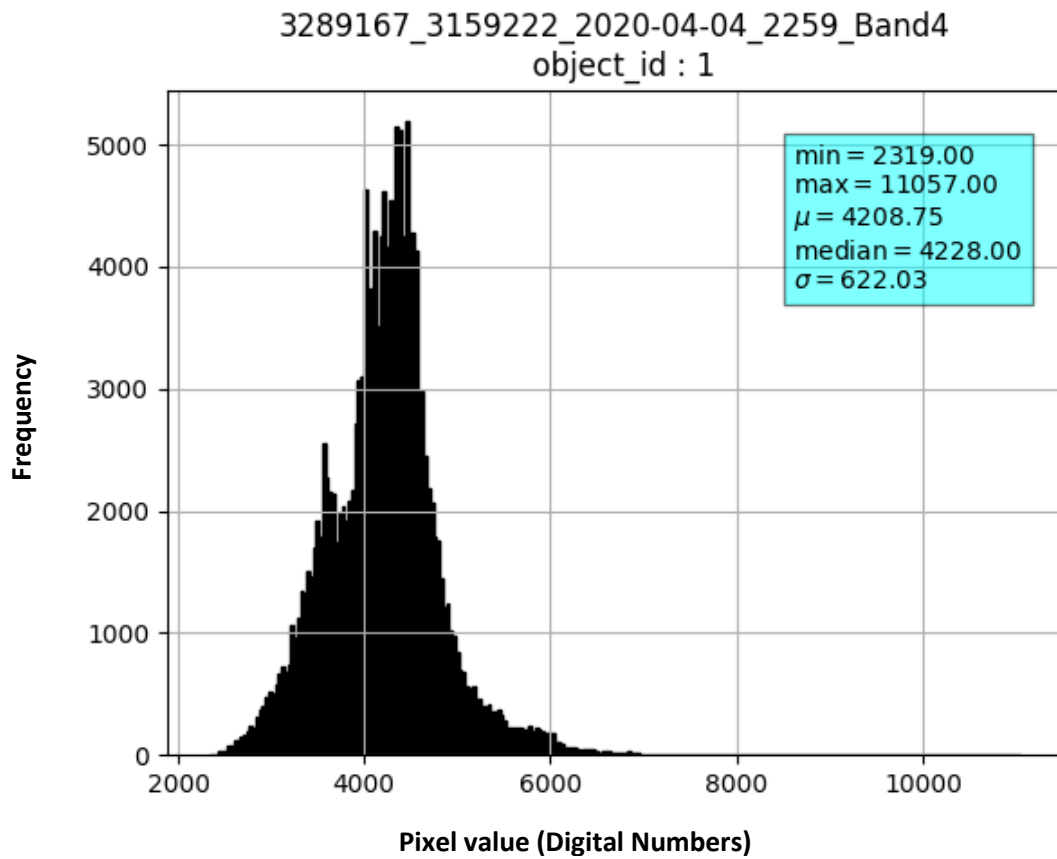


SuperDove – Red Edge Band (Band 4)

Id 01

2.5.4

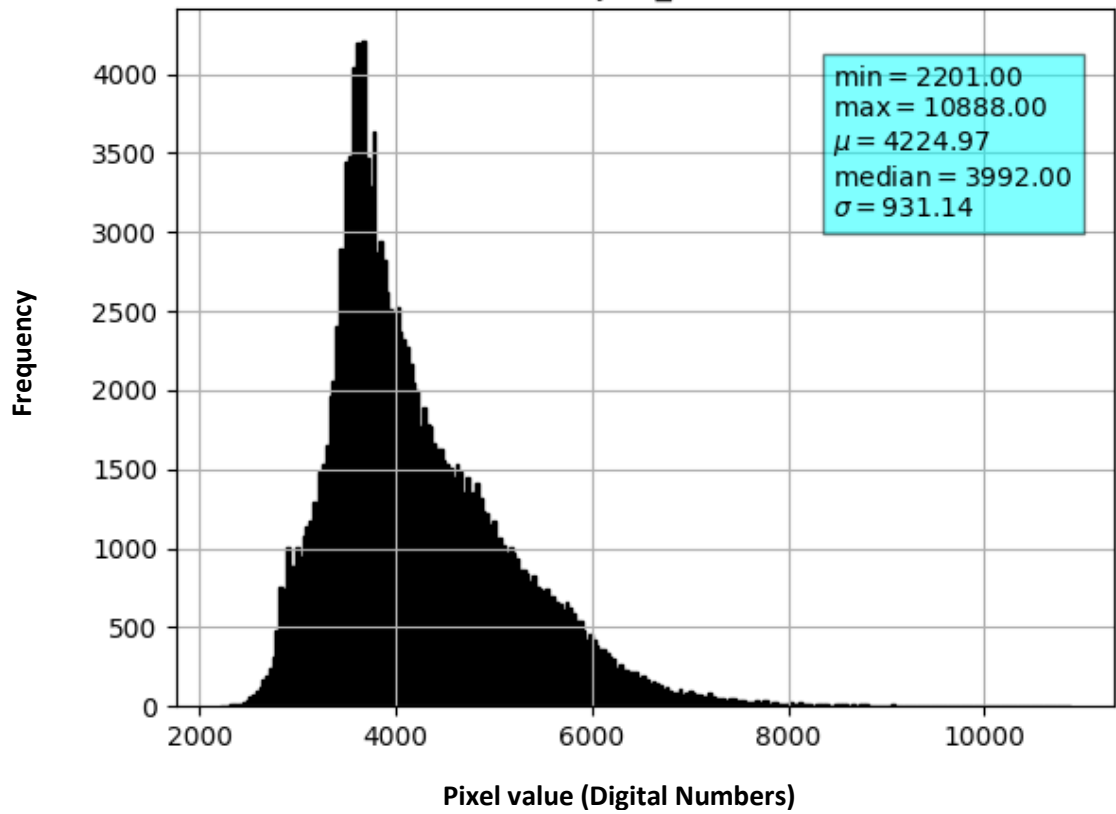
2.5.4.1



Id 02

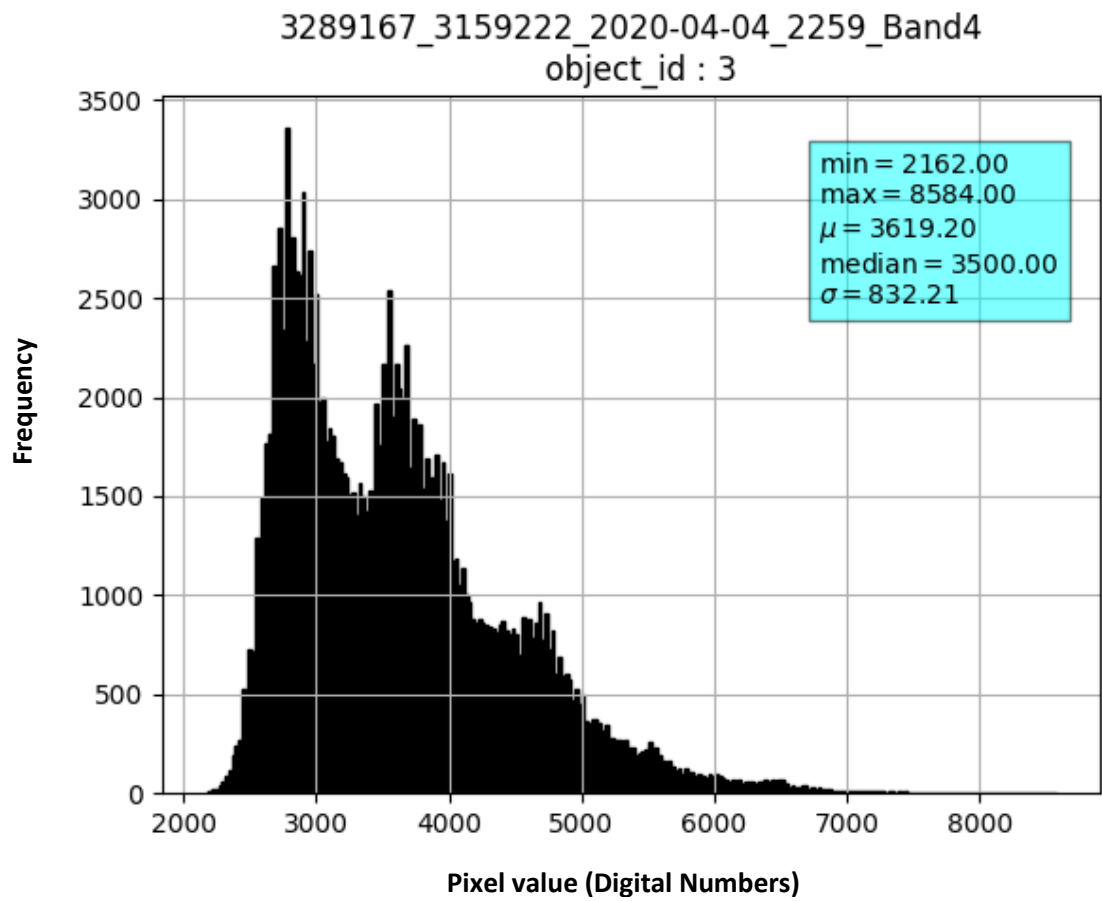
3289167_3159222_2020-04-04_2259_Band4
object_id : 2

2.5.4.2



Id 03

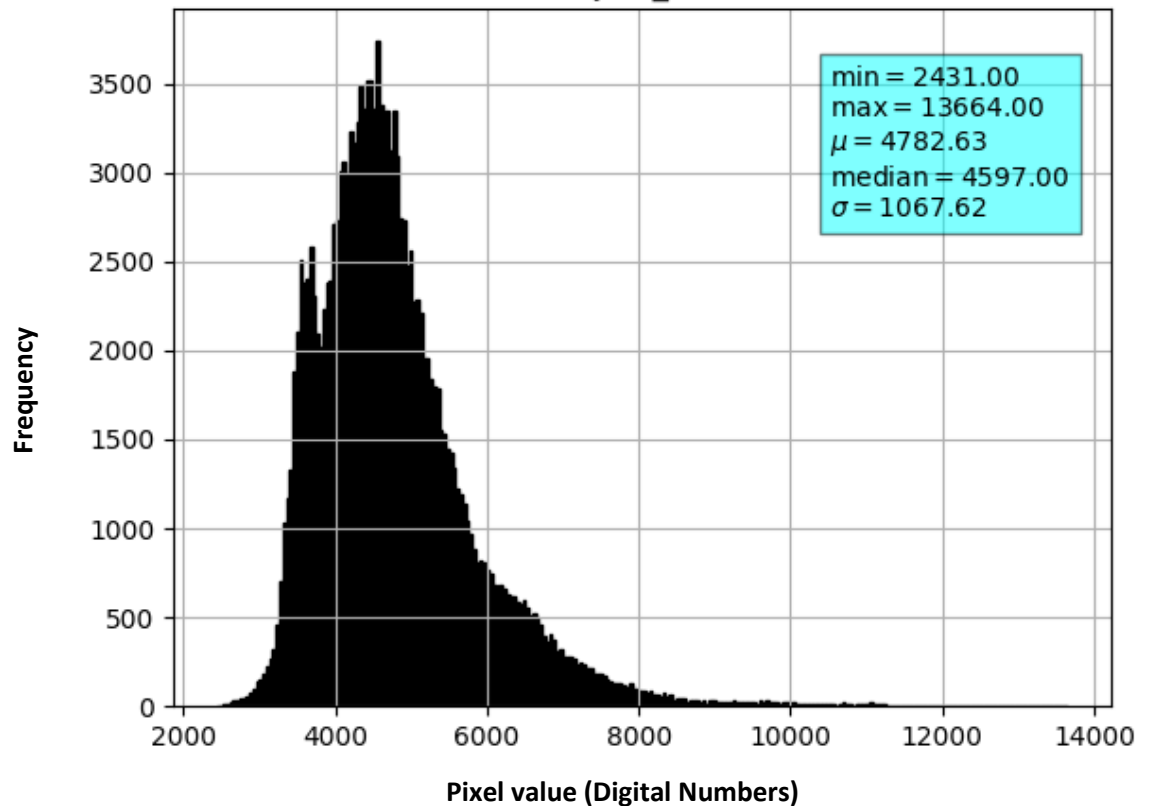
2.5.4.3



Id 04

2.5.4.4

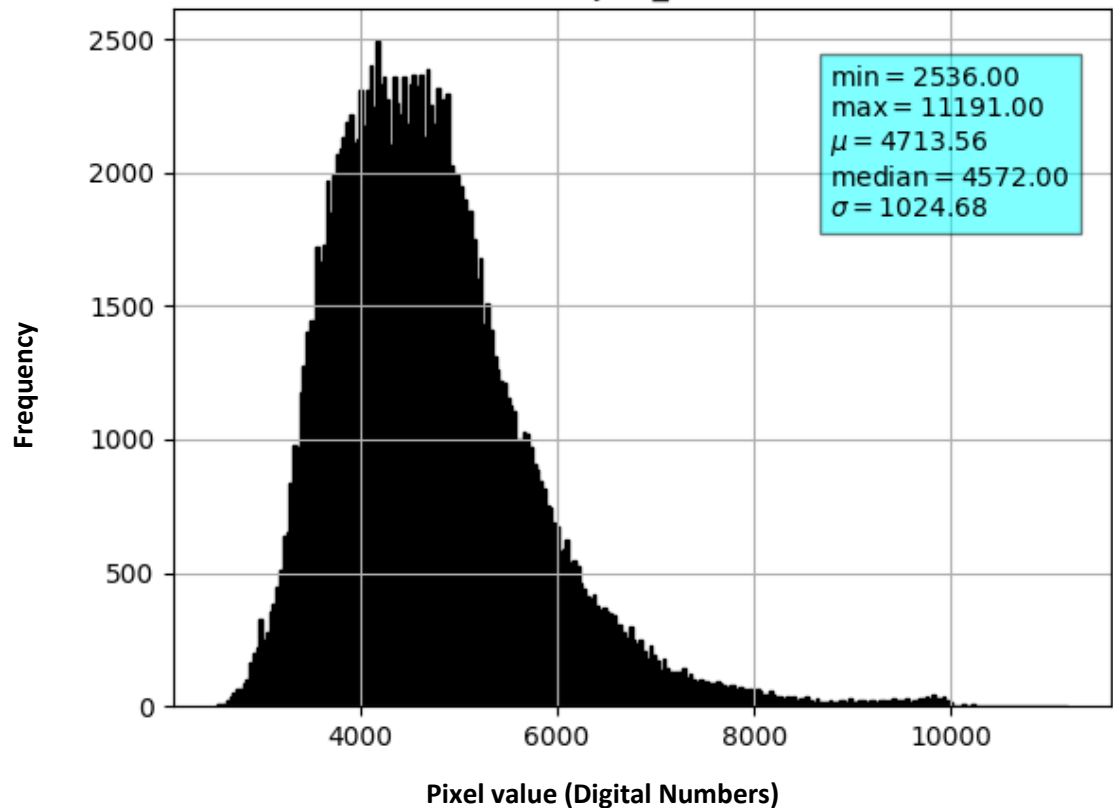
3289167_3159222_2020-04-04_2259_Band4
object_id : 4



Id 05

2.5.4.5

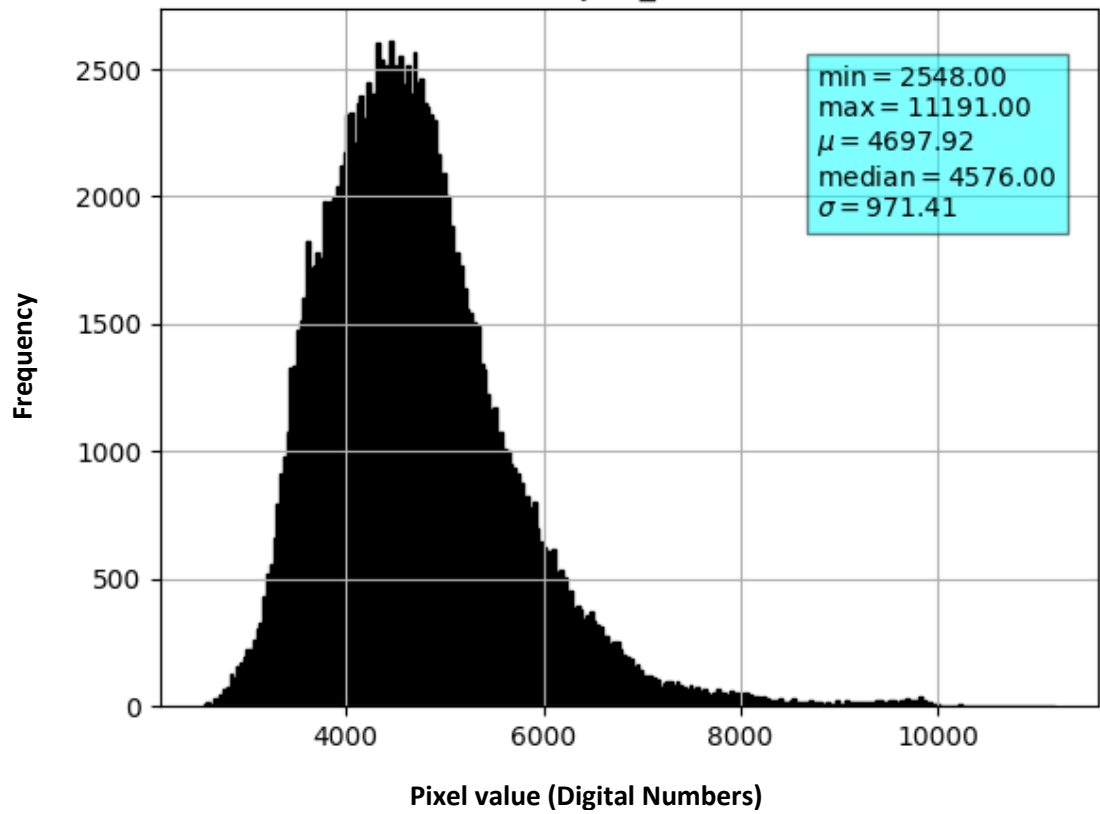
3289167_3159222_2020-04-04_2259_Band4
object_id : 5



Id 06

3289167_3159222_2020-04-04_2259_Band4
object_id : 6

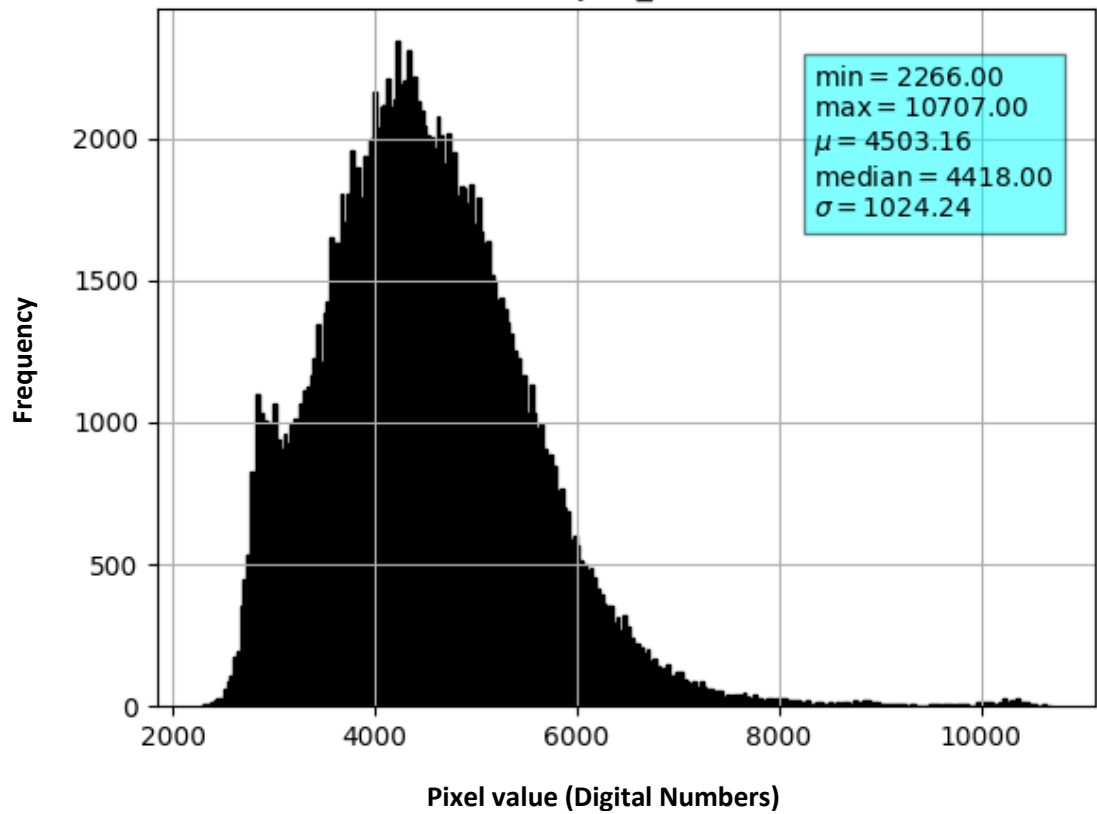
2.5.4.6



Id 07

3289167_3159222_2020-04-04_2259_Band4
object_id : 7

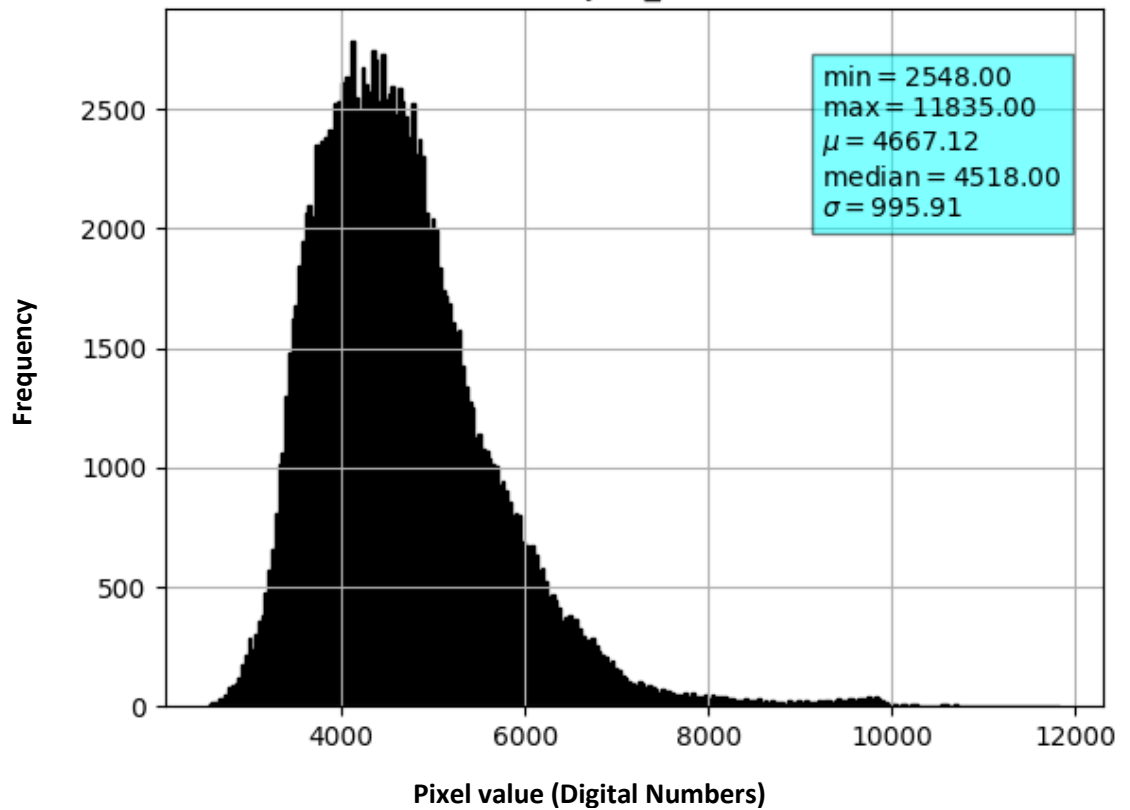
2.5.4.7



Id 08

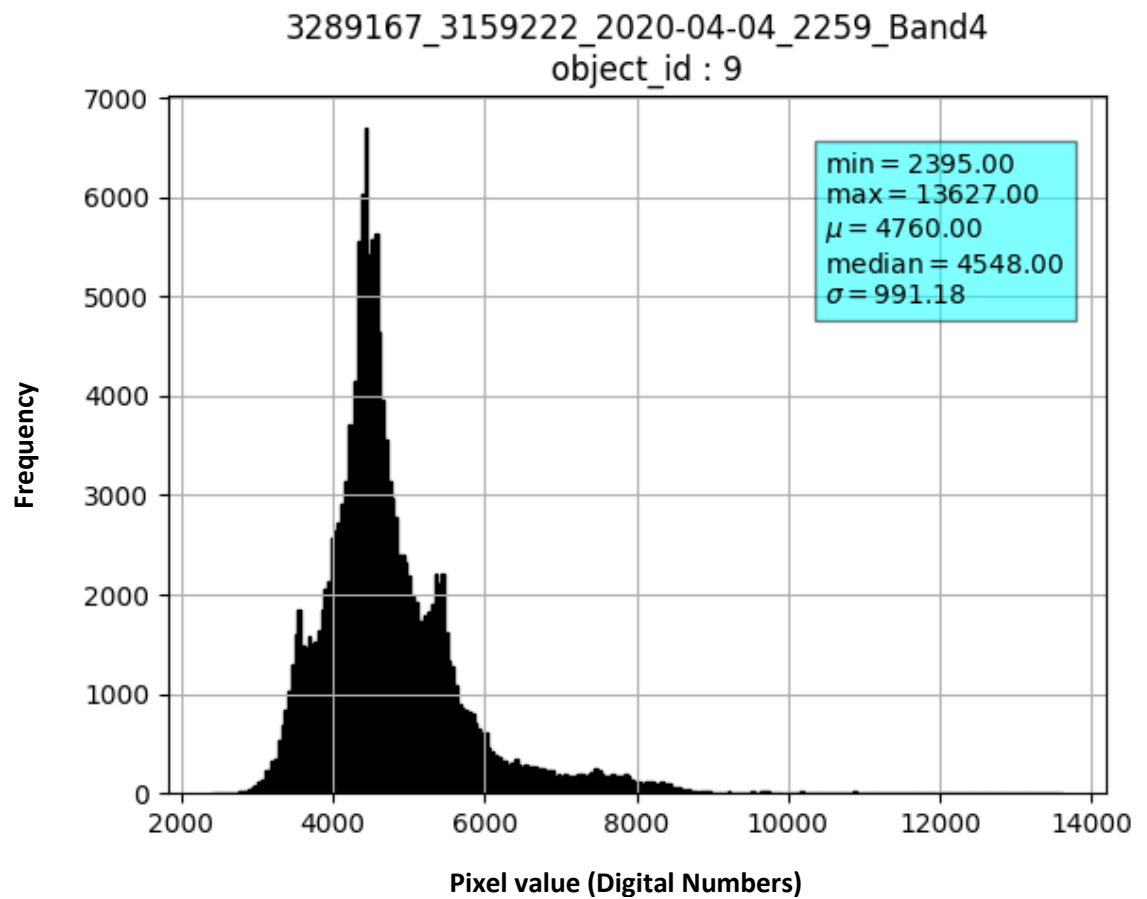
3289167_3159222_2020-04-04_2259_Band4
object_id : 8

2.5.4.8



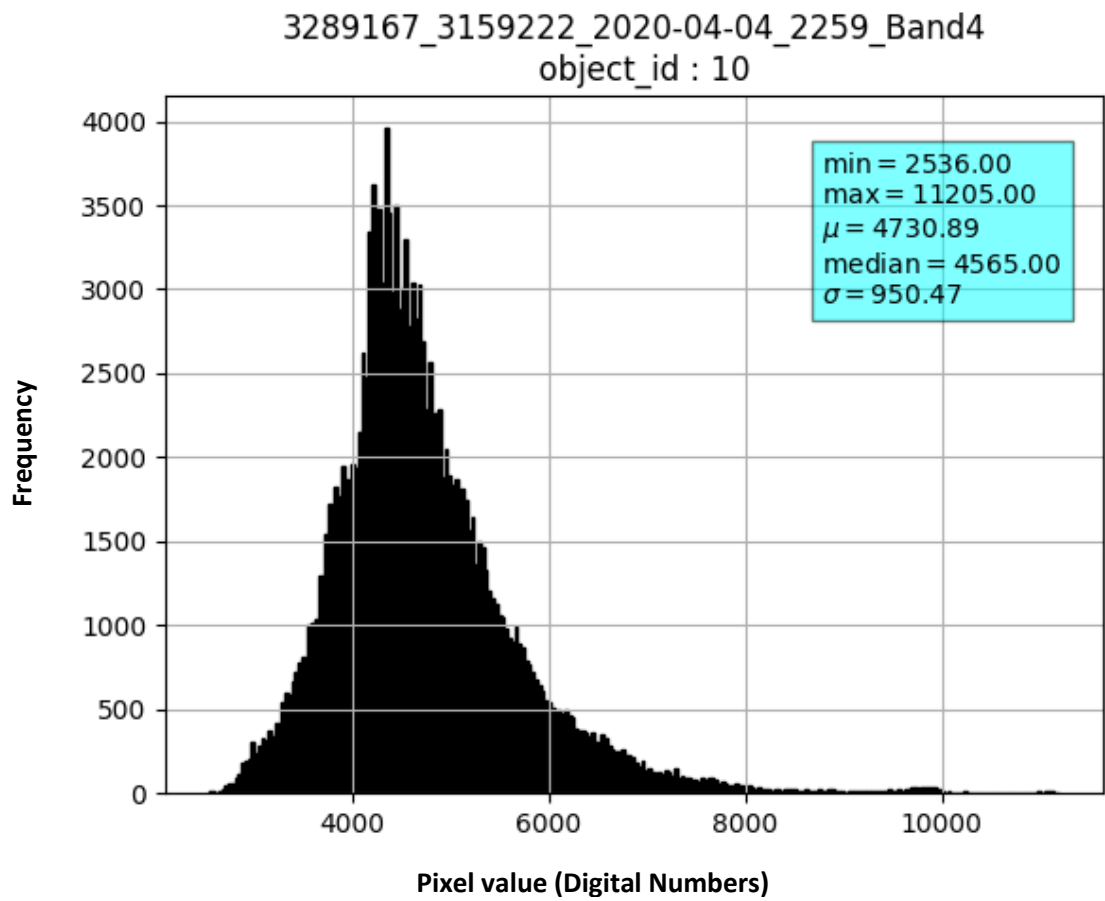
Id 09

2.5.4.9



Id 10

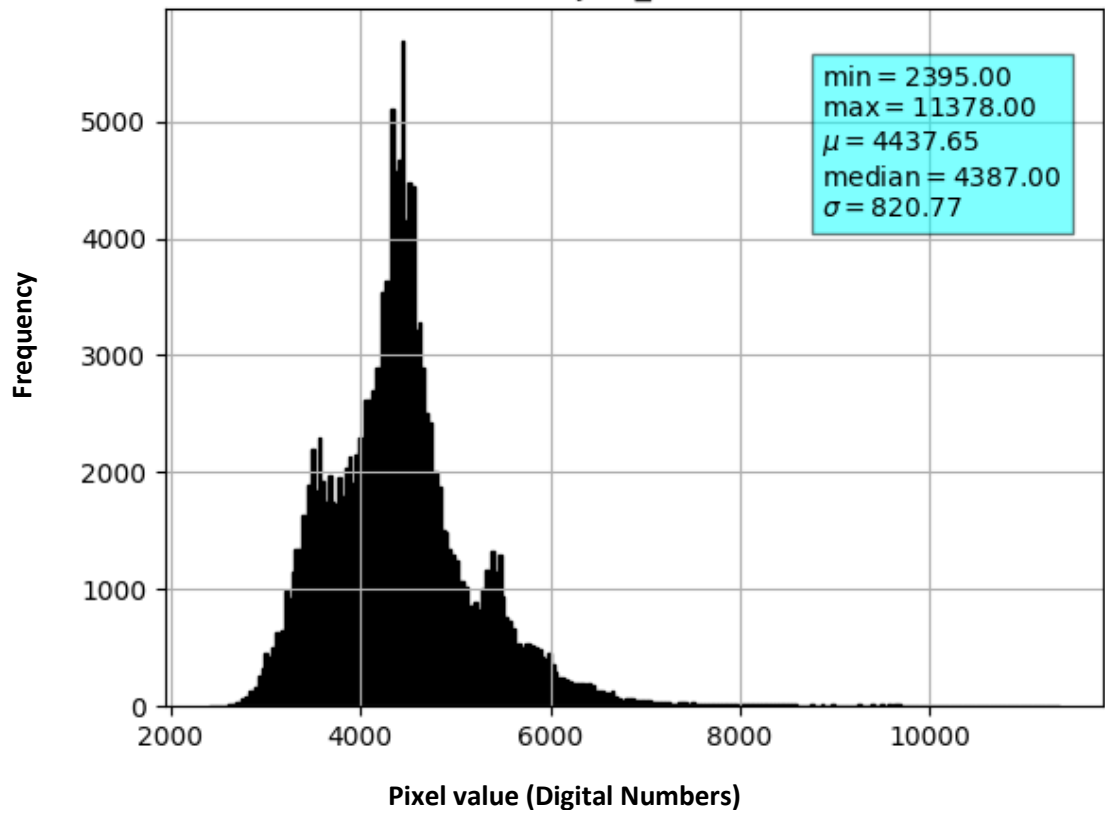
2.5.4.10



Id 11

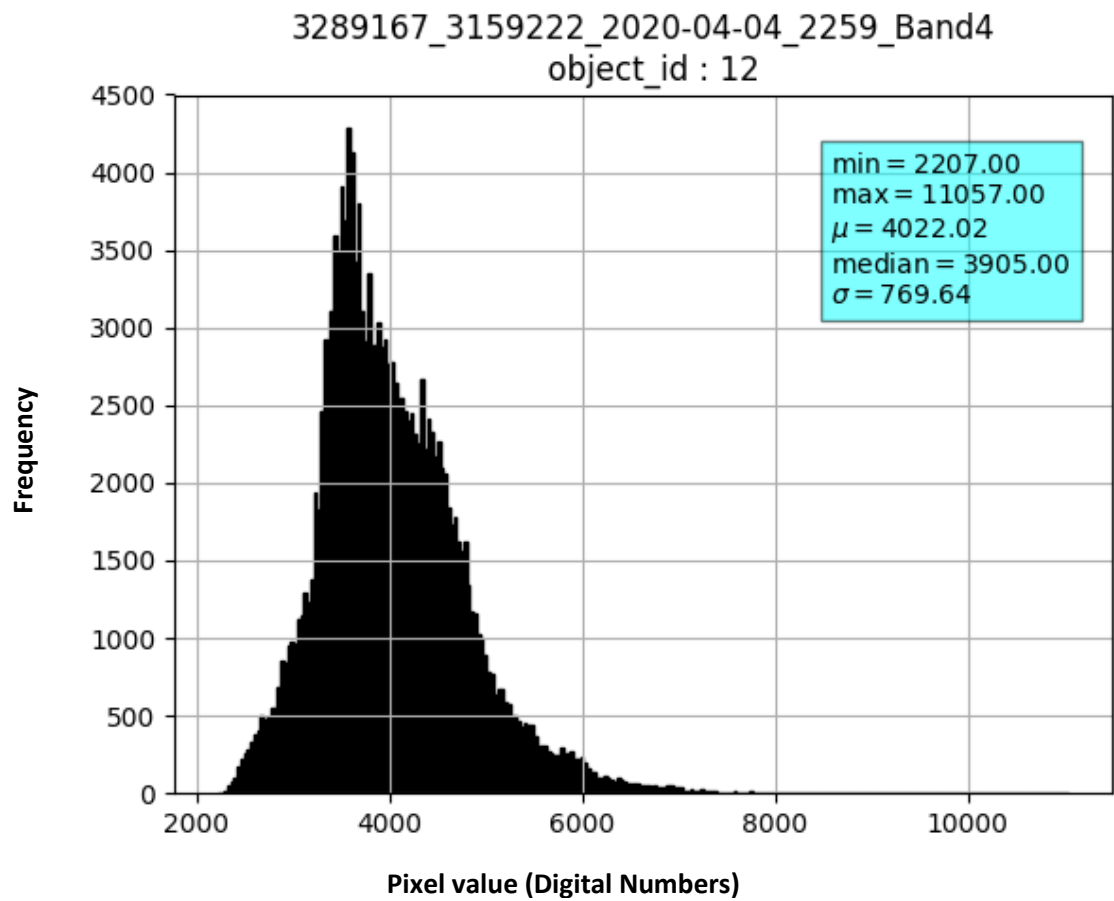
3289167_3159222_2020-04-04_2259_Band4
object_id : 11

2.5.4.11



Id 12

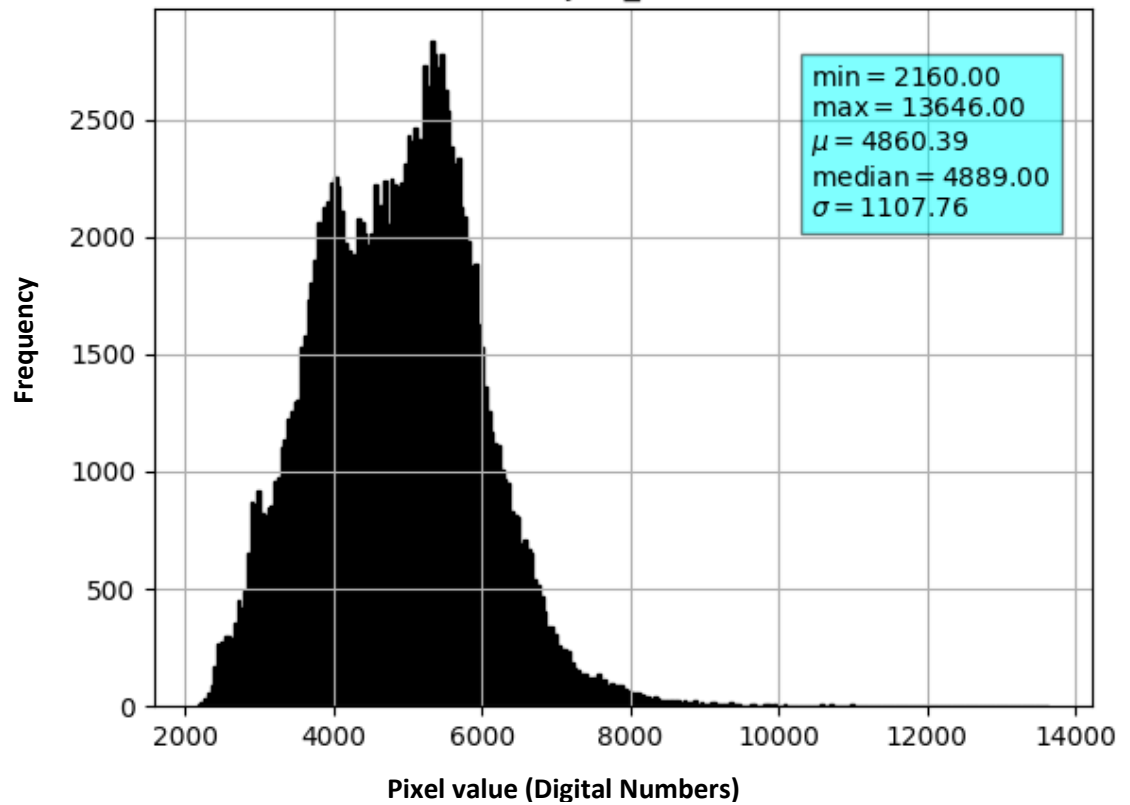
2.5.4.12



Id 13

3289167_3159222_2020-04-04_2259_Band4
object_id : 13

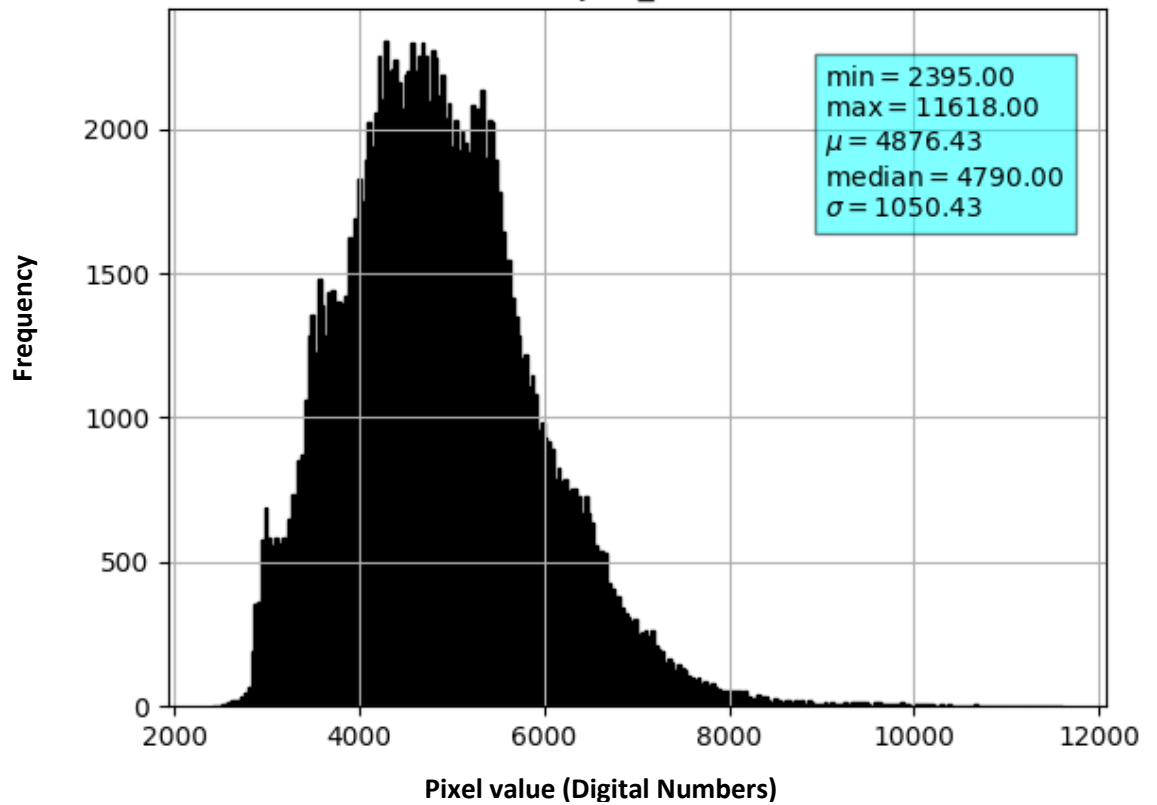
2.5.4.13



Id 14

3289167_3159222_2020-04-04_2259_Band4
object_id : 14

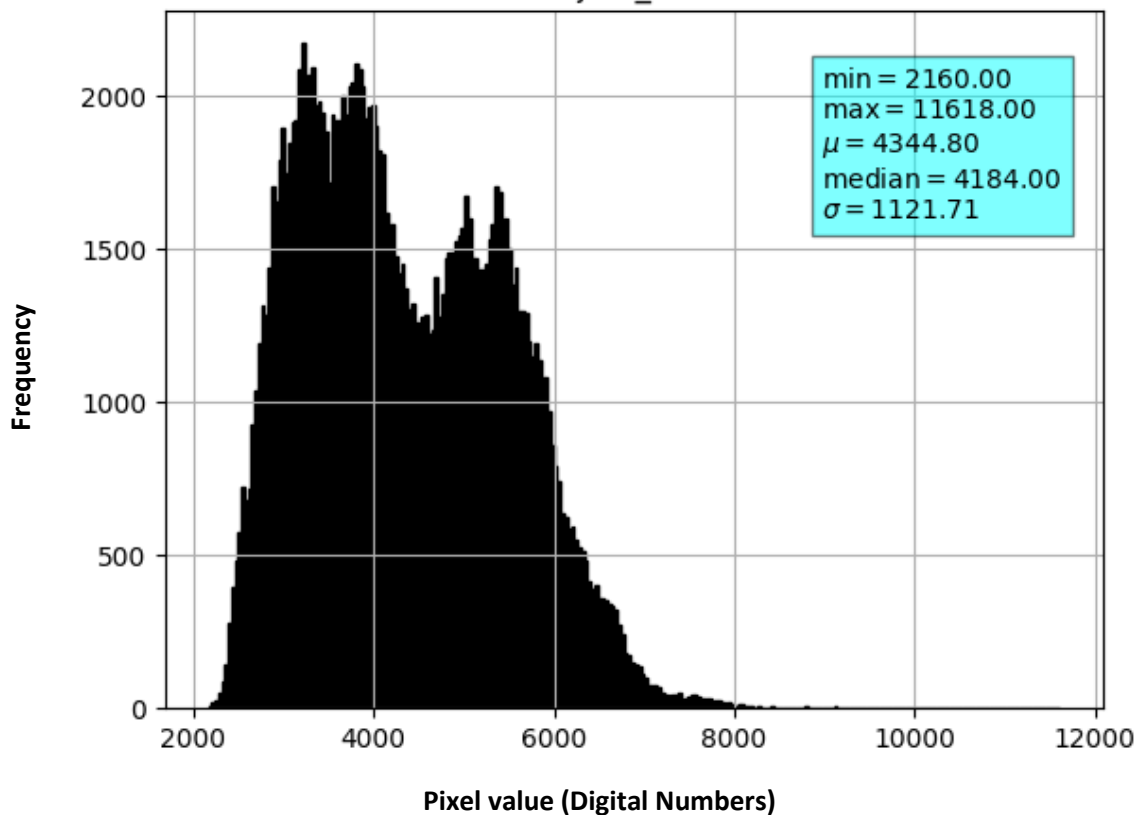
2.5.4.14



Id 15

3289167_3159222_2020-04-04_2259_Band4
object_id : 15

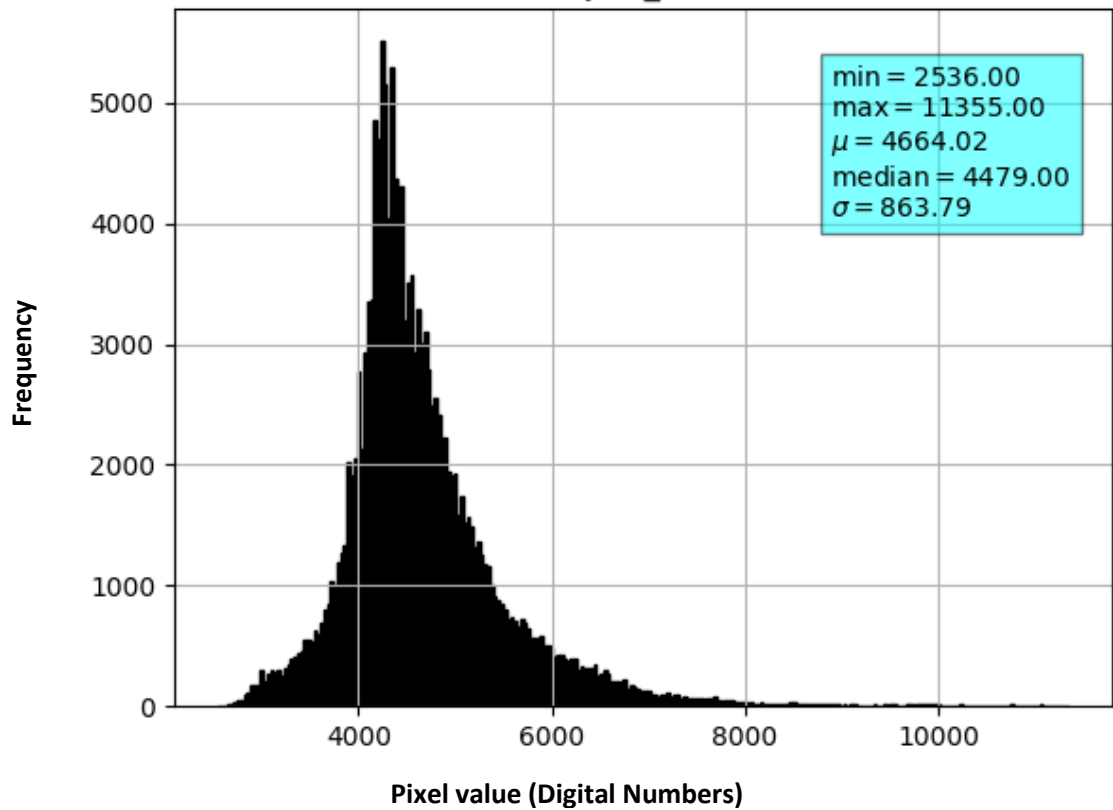
2.5.4.15



Id 16

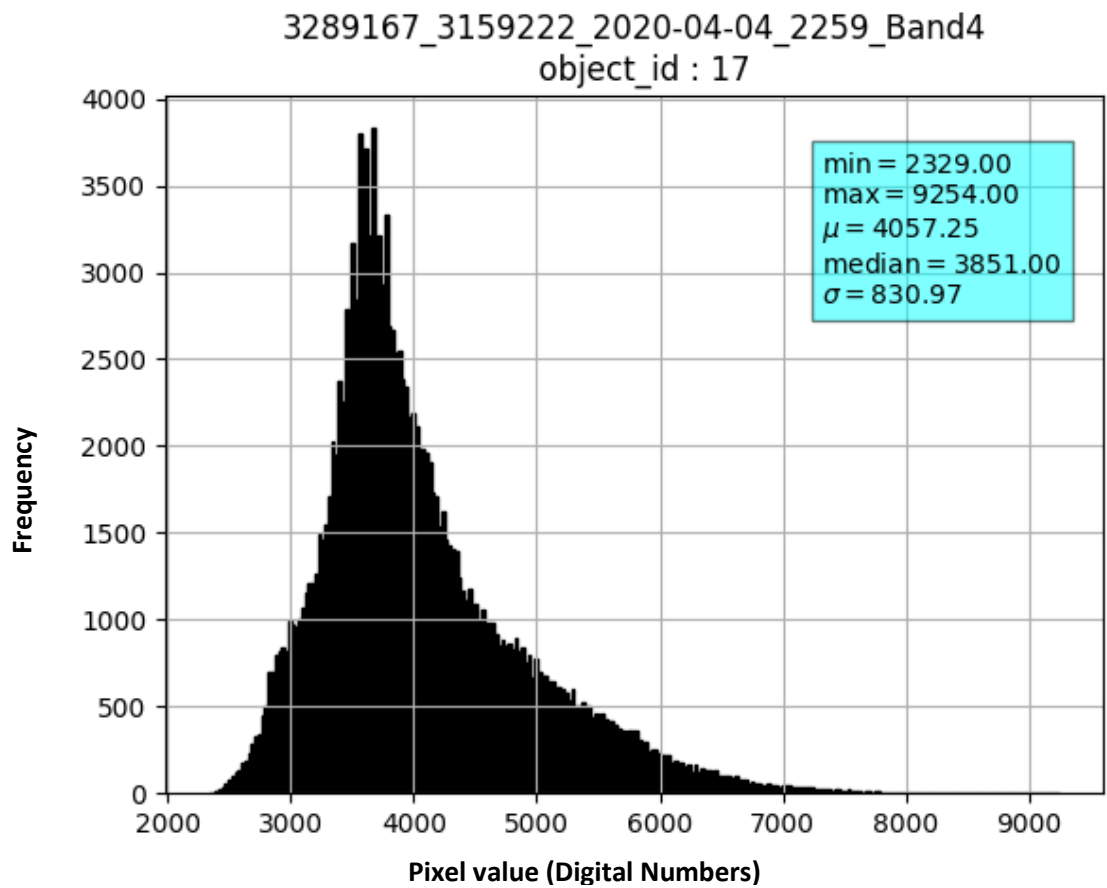
3289167_3159222_2020-04-04_2259_Band4
object_id : 16

2.5.4.16



Id 17

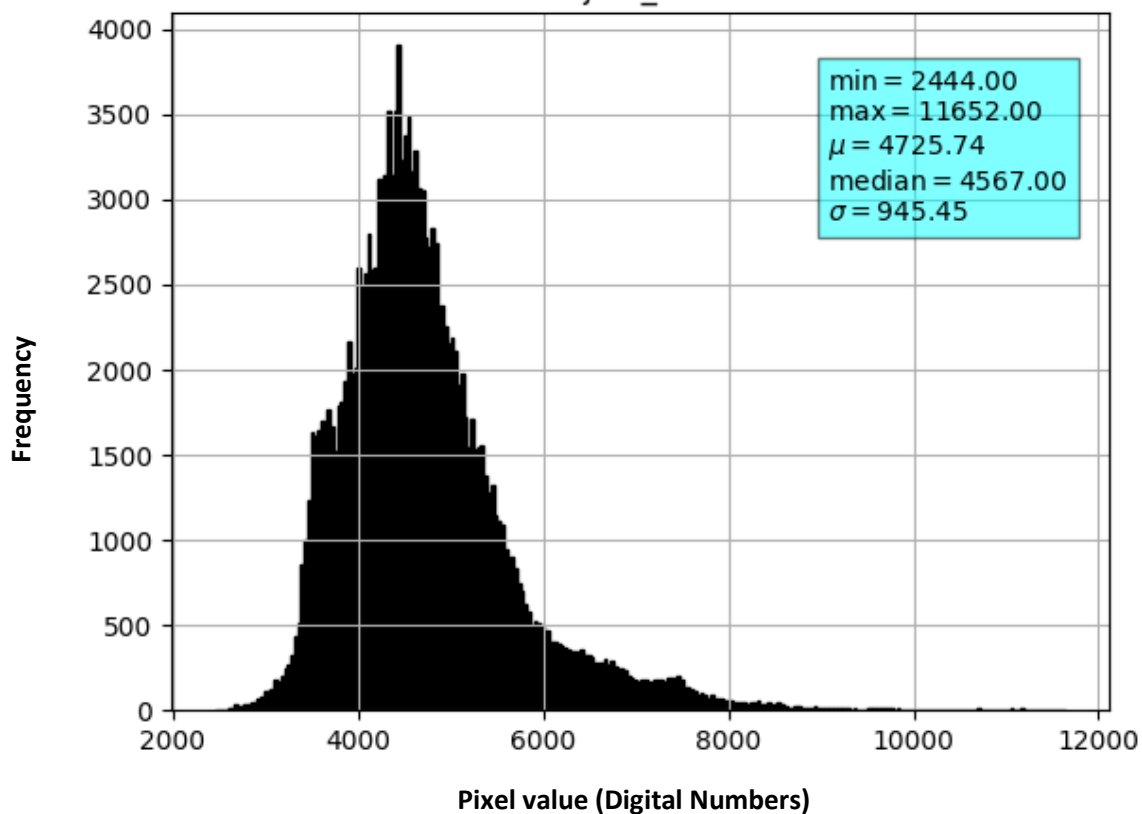
2.5.4.17



Id 18

2.5.4.18

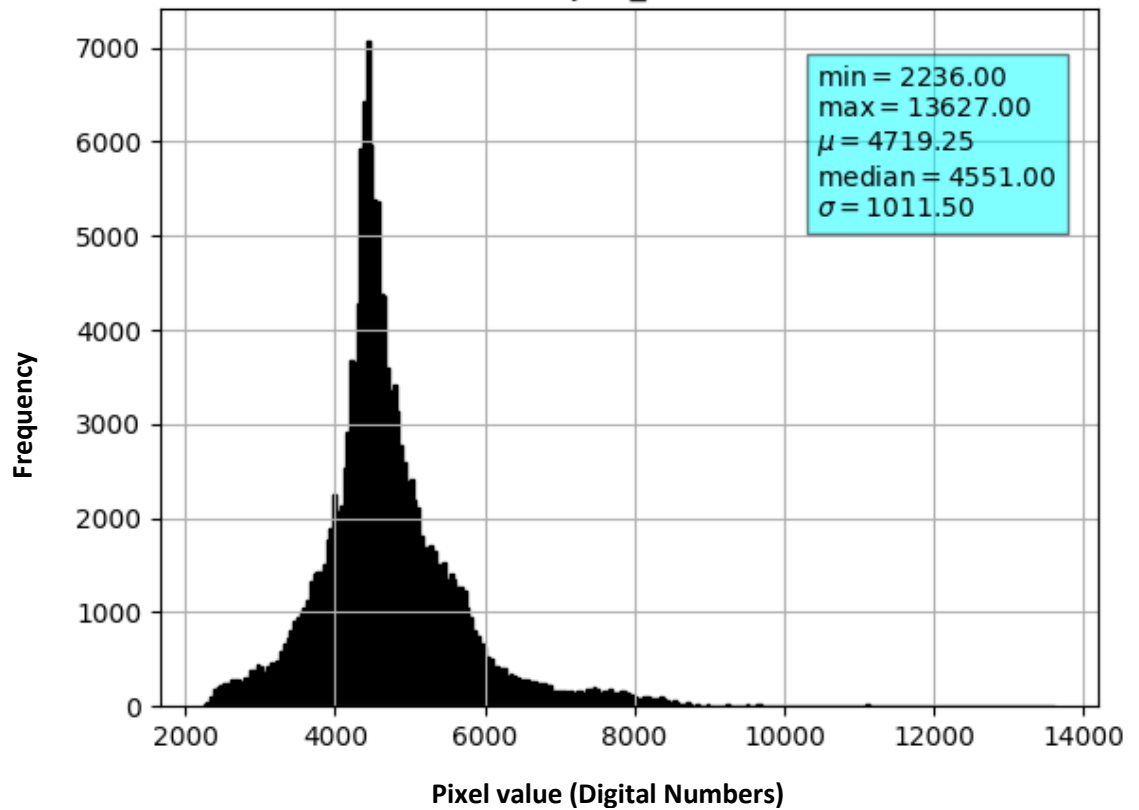
3289167_3159222_2020-04-04_2259_Band4
object_id : 18



Id 19

2.5.4.19

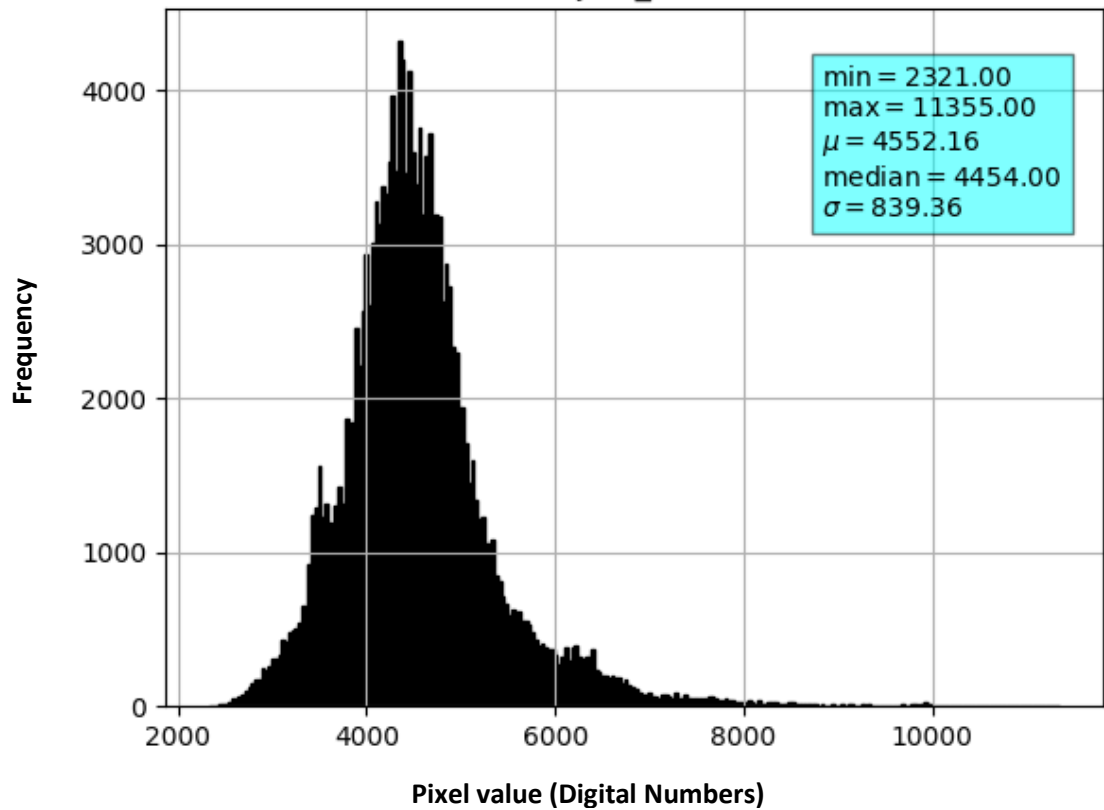
3289167_3159222_2020-04-04_2259_Band4
object_id : 19



Id 20

3289167_3159222_2020-04-04_2259_Band4
object_id : 20

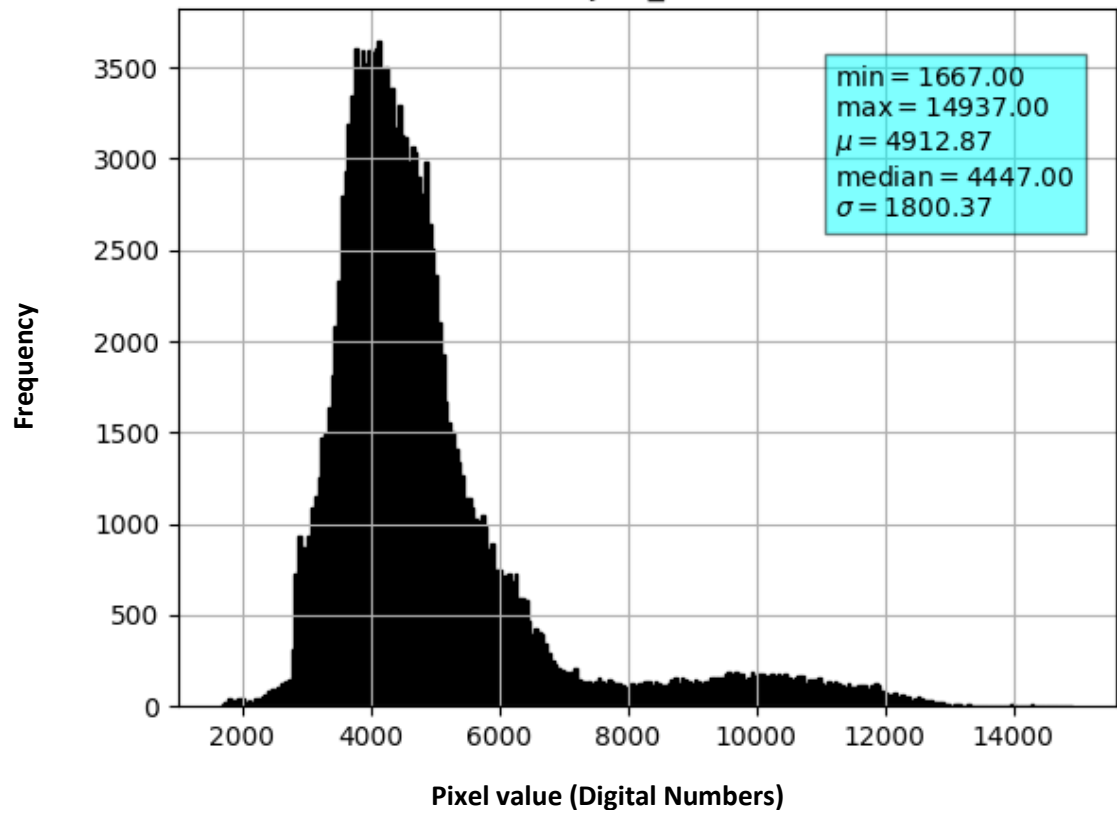
2.5.4.20



Id 21

3289167_3159222_2020-04-04_2259_Band4
object_id : 21

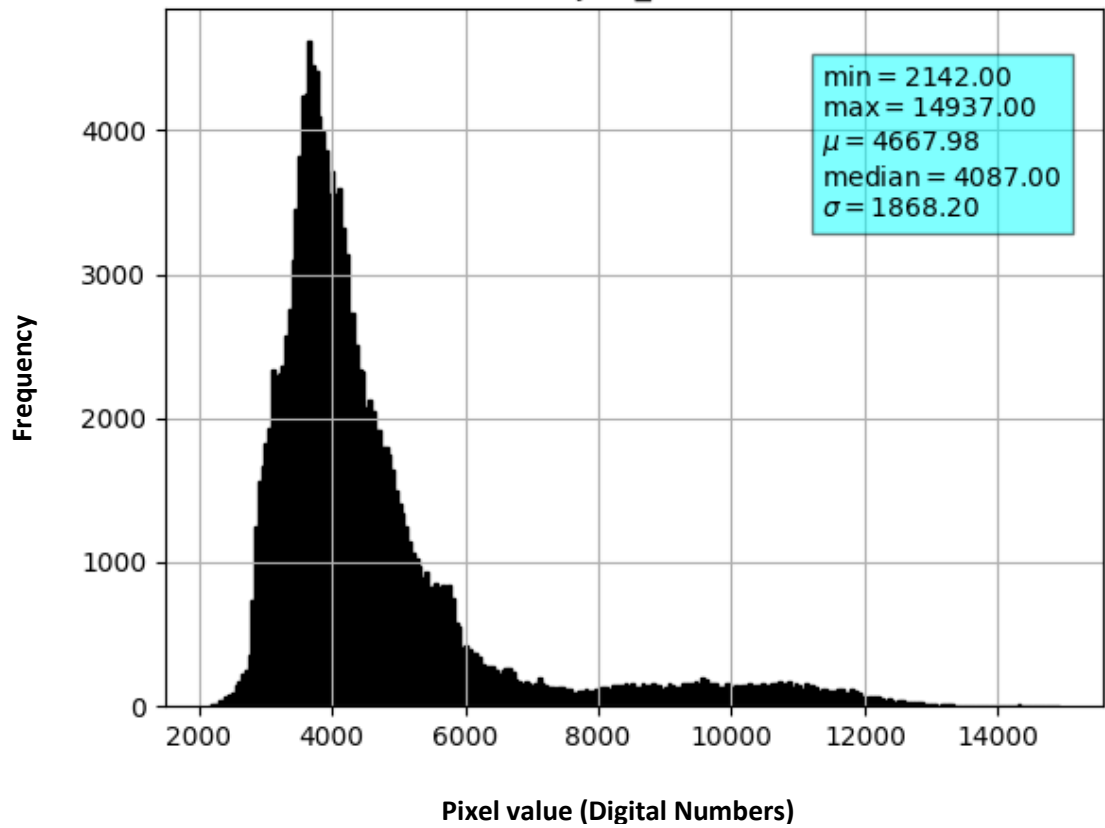
2.5.4.21



Id 22

3289167_3159222_2020-04-04_2259_Band4
object_id : 22

2.5.4.22

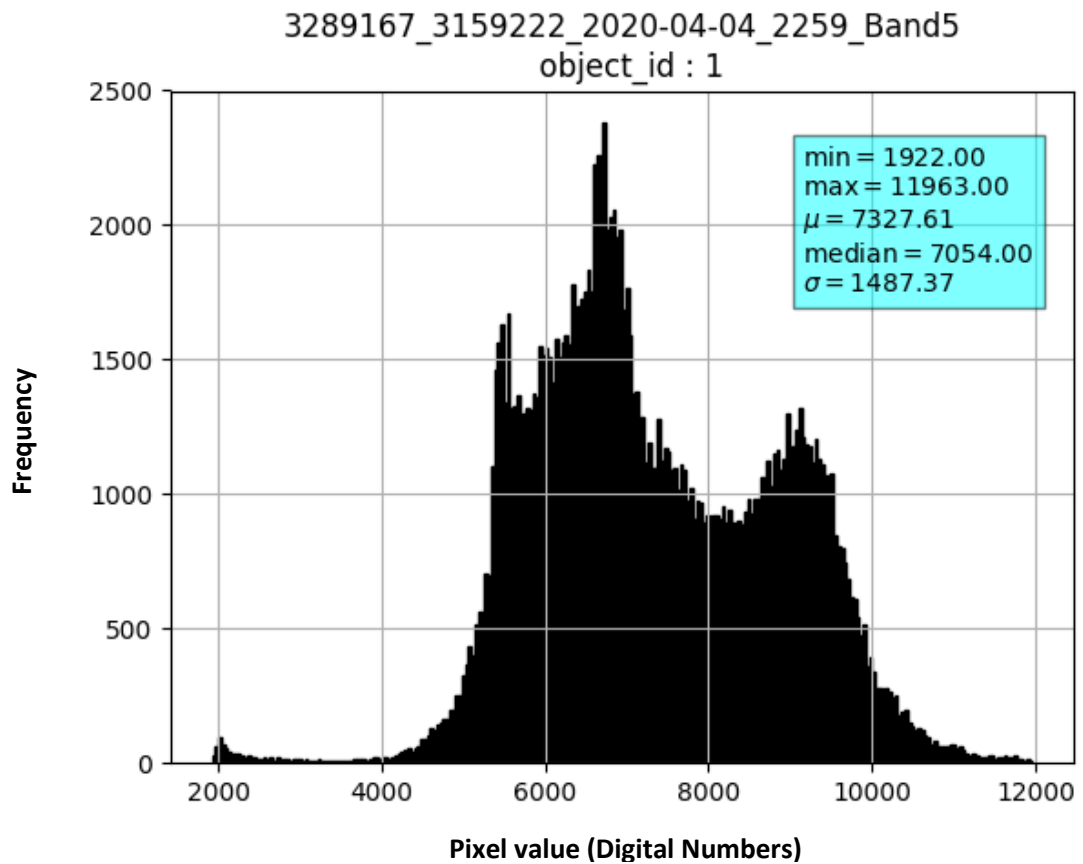


SuperDove – NIR Band (Band 5)

Id 01

2.5.5

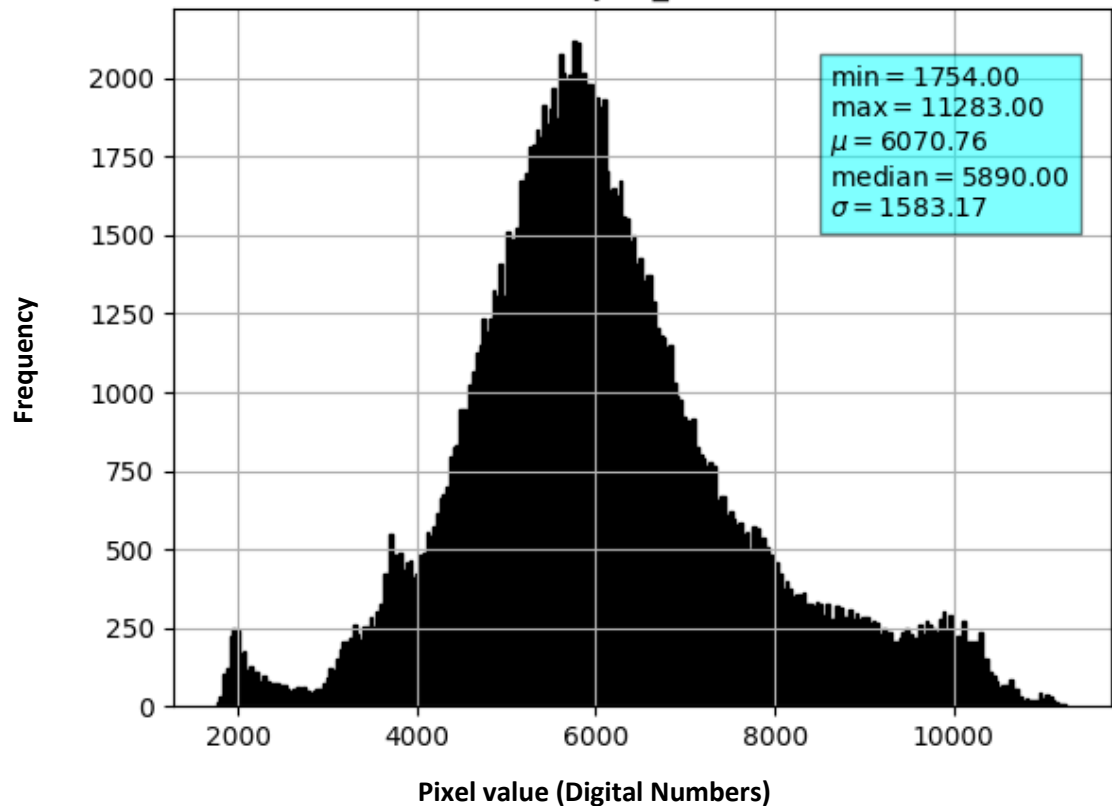
2.5.5.1



Id 02

2.5.5.2

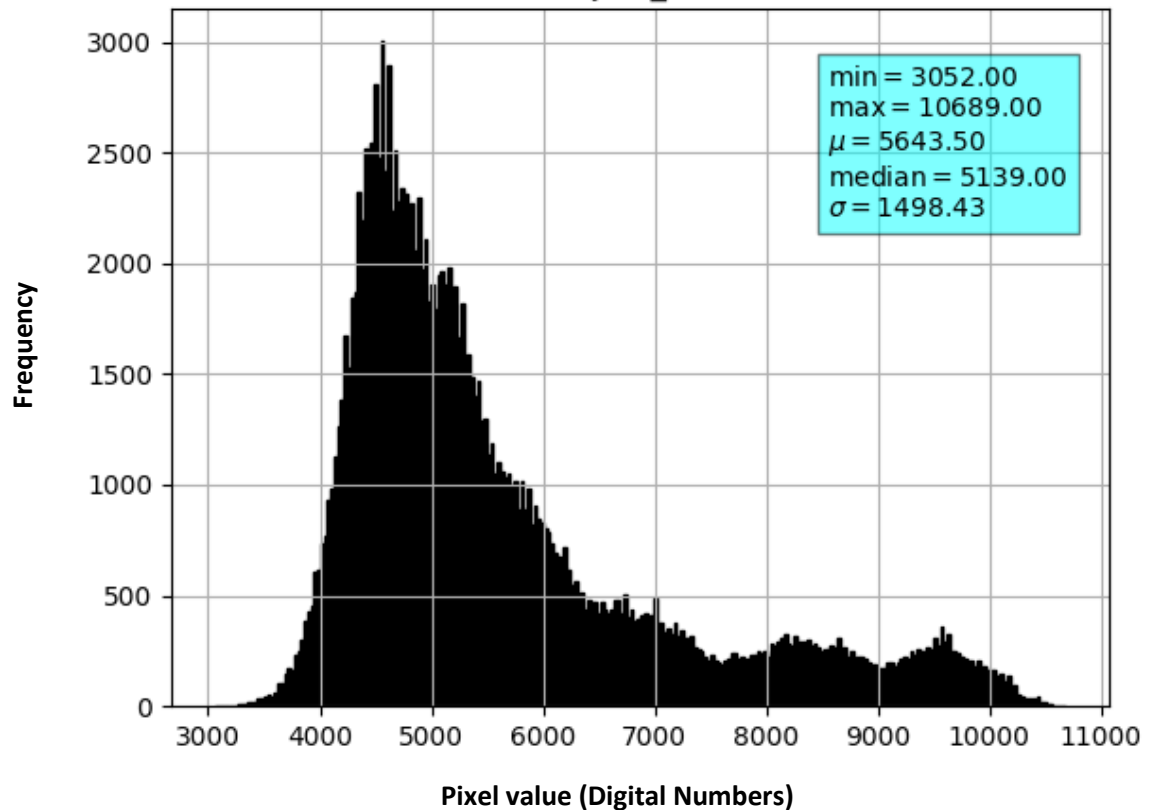
3289167_3159222_2020-04-04_2259_Band5
object_id : 2



Id 03

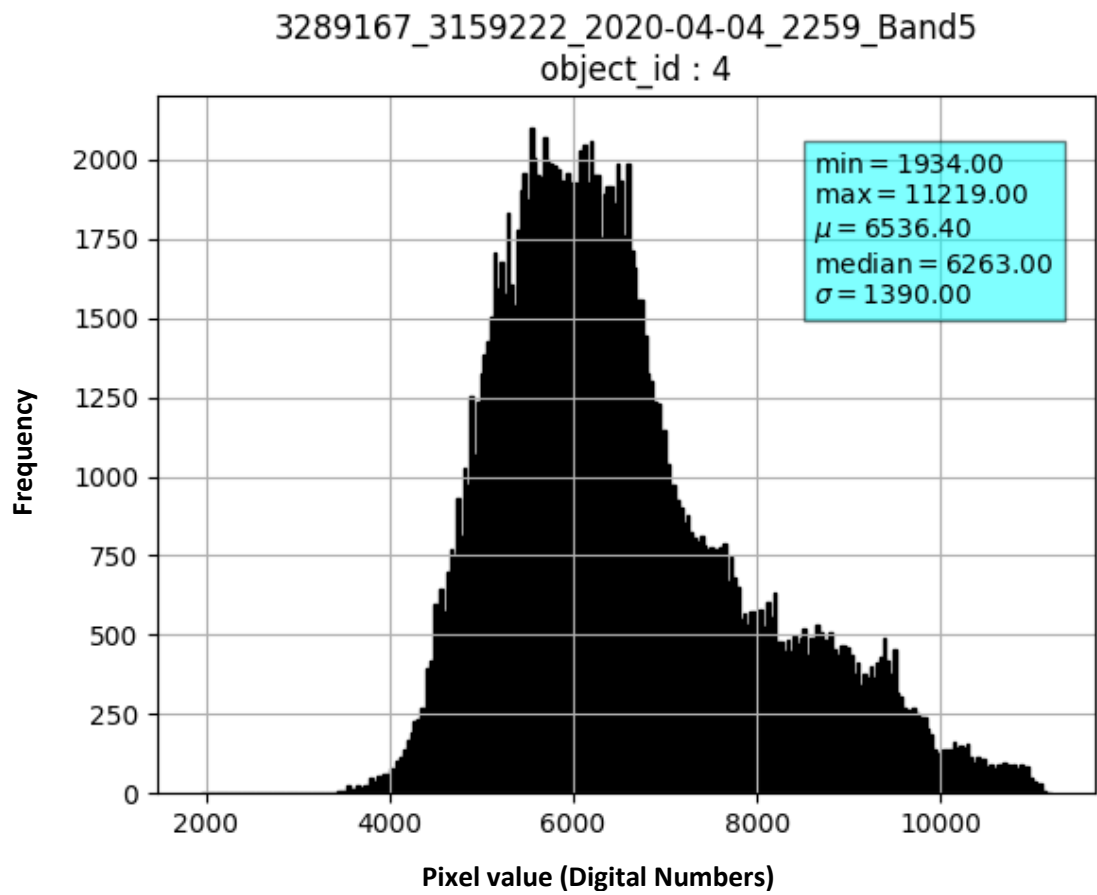
2.5.5.3

3289167_3159222_2020-04-04_2259_Band5
object_id : 3



Id 04

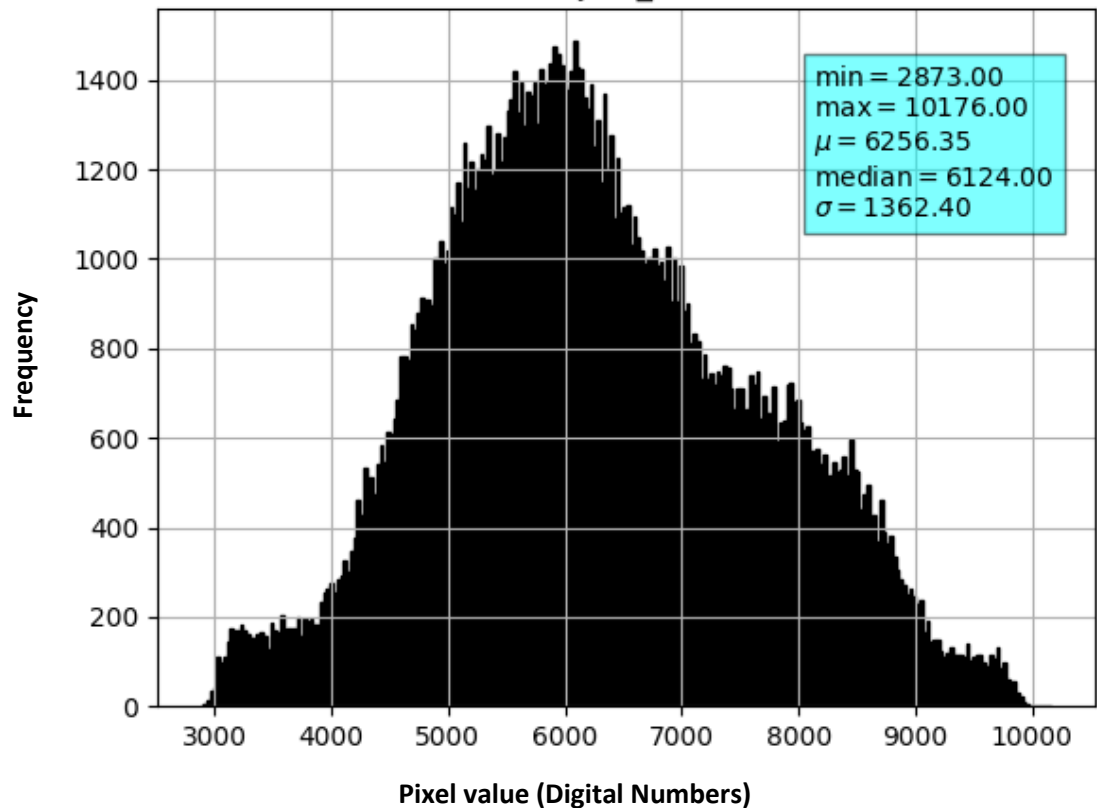
2.5.5.4



Id 05

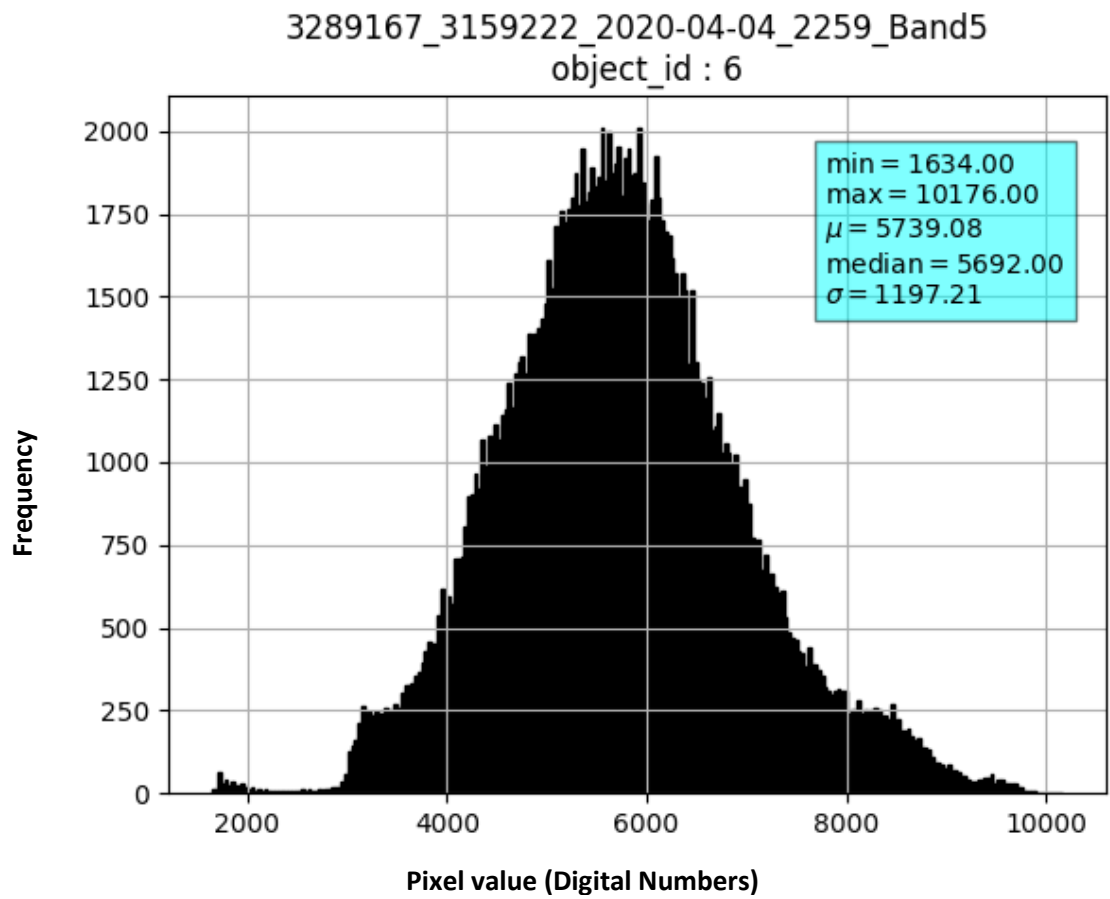
2.5.5.5

3289167_3159222_2020-04-04_2259_Band5
object_id : 5



Id 06

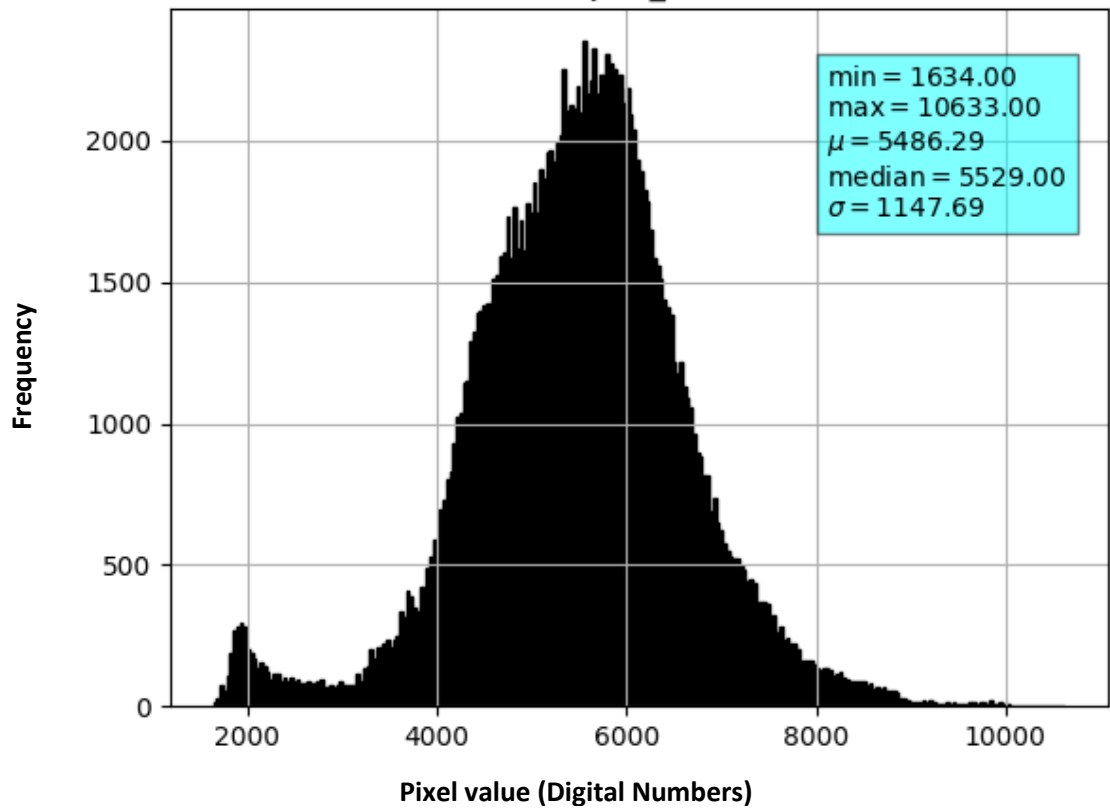
2.5.5.6



Id 07

3289167_3159222_2020-04-04_2259_Band5
object_id : 7

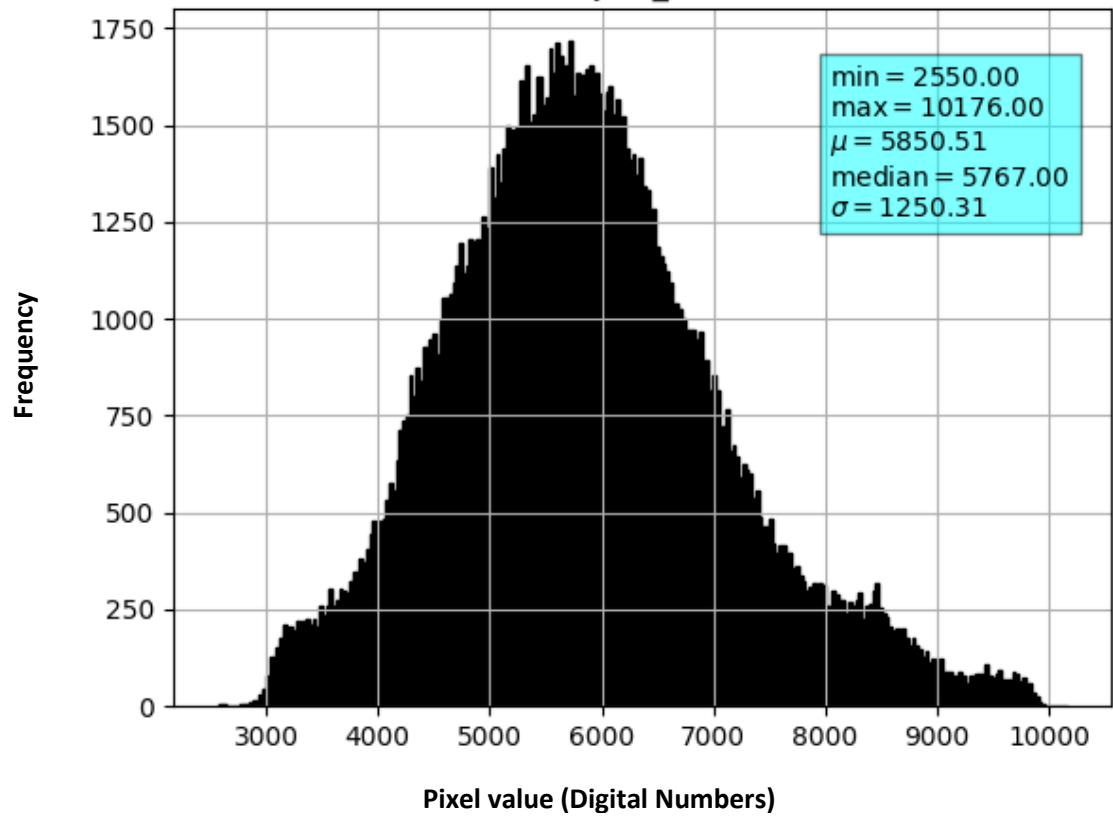
2.5.5.7



Id 08

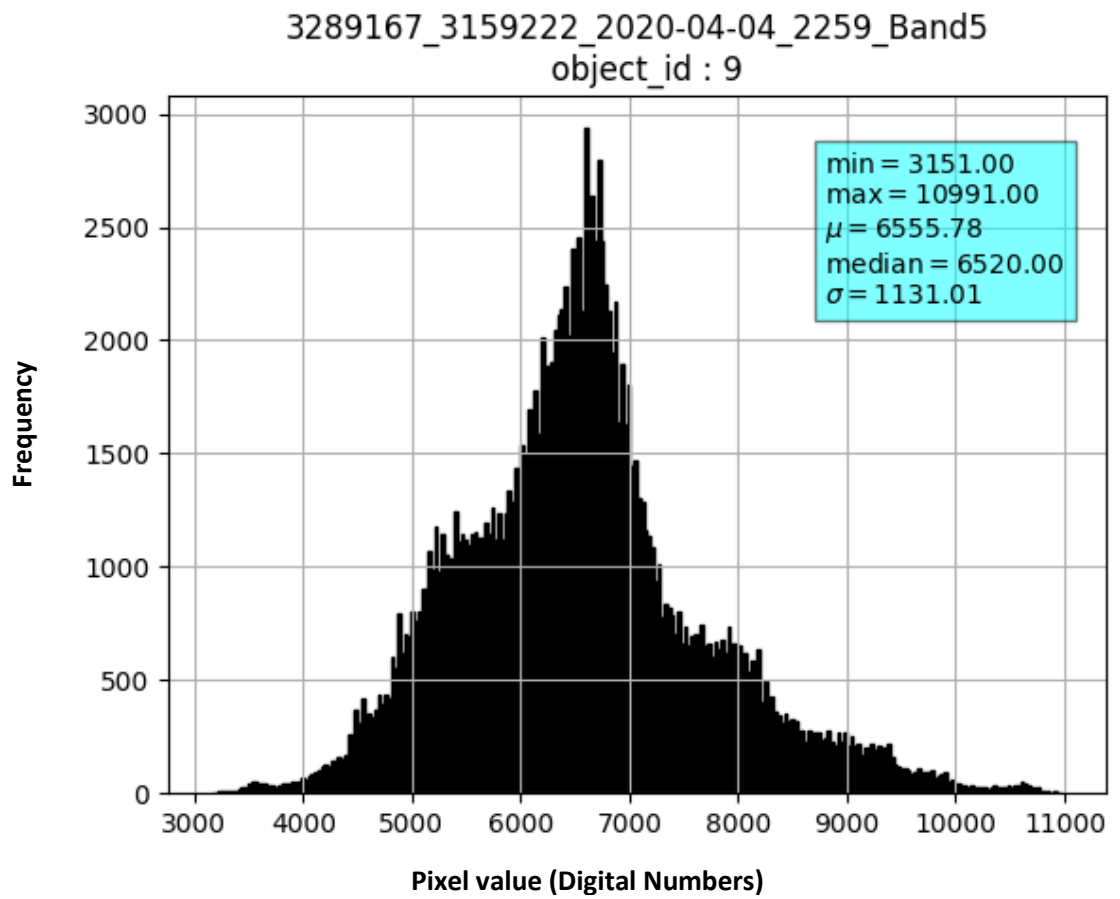
2.5.5.8

3289167_3159222_2020-04-04_2259_Band5
object_id : 8



Id 09

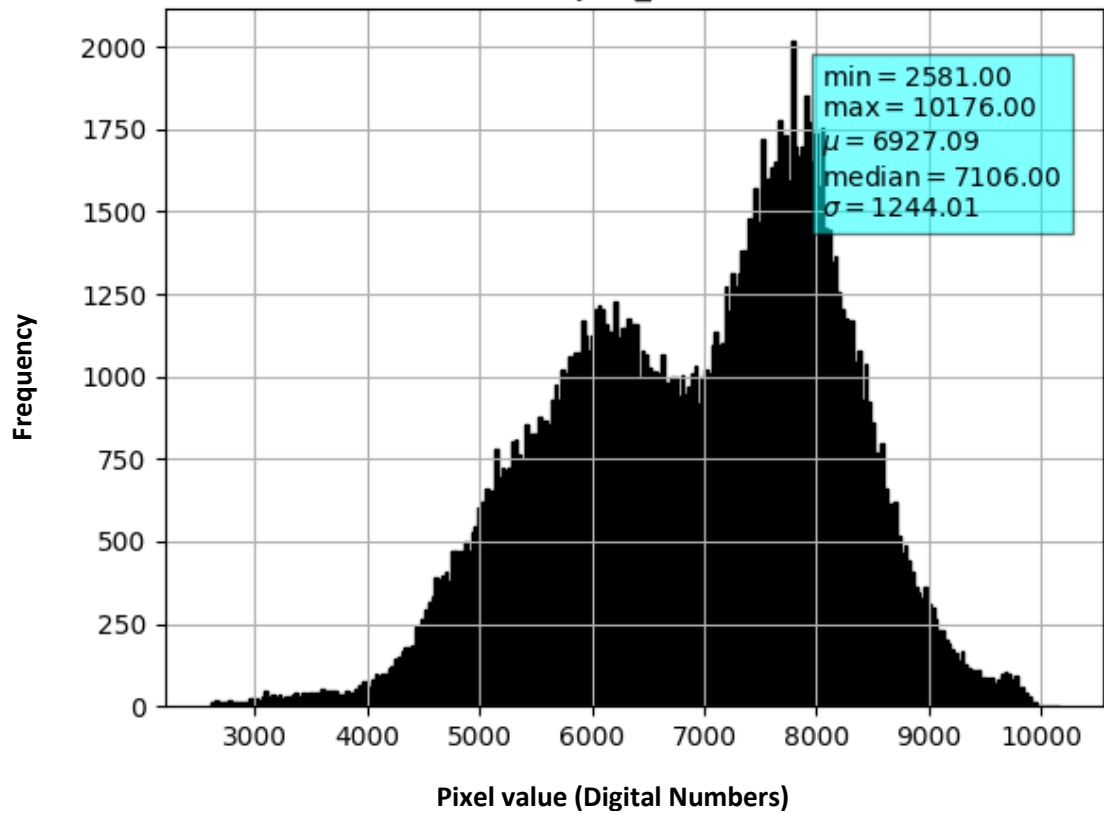
2.5.5.9



Id 10

2.5.5.10

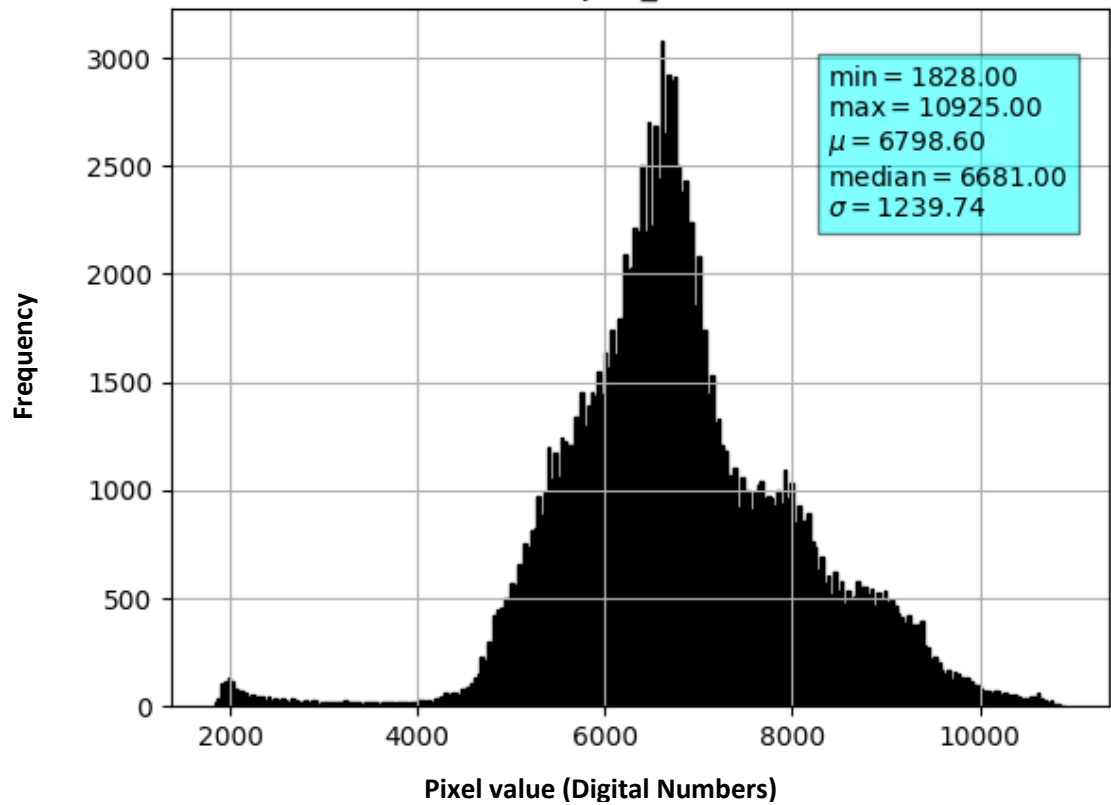
3289167_3159222_2020-04-04_2259_Band5
object_id : 10



Id 11

3289167_3159222_2020-04-04_2259_Band5
object_id : 11

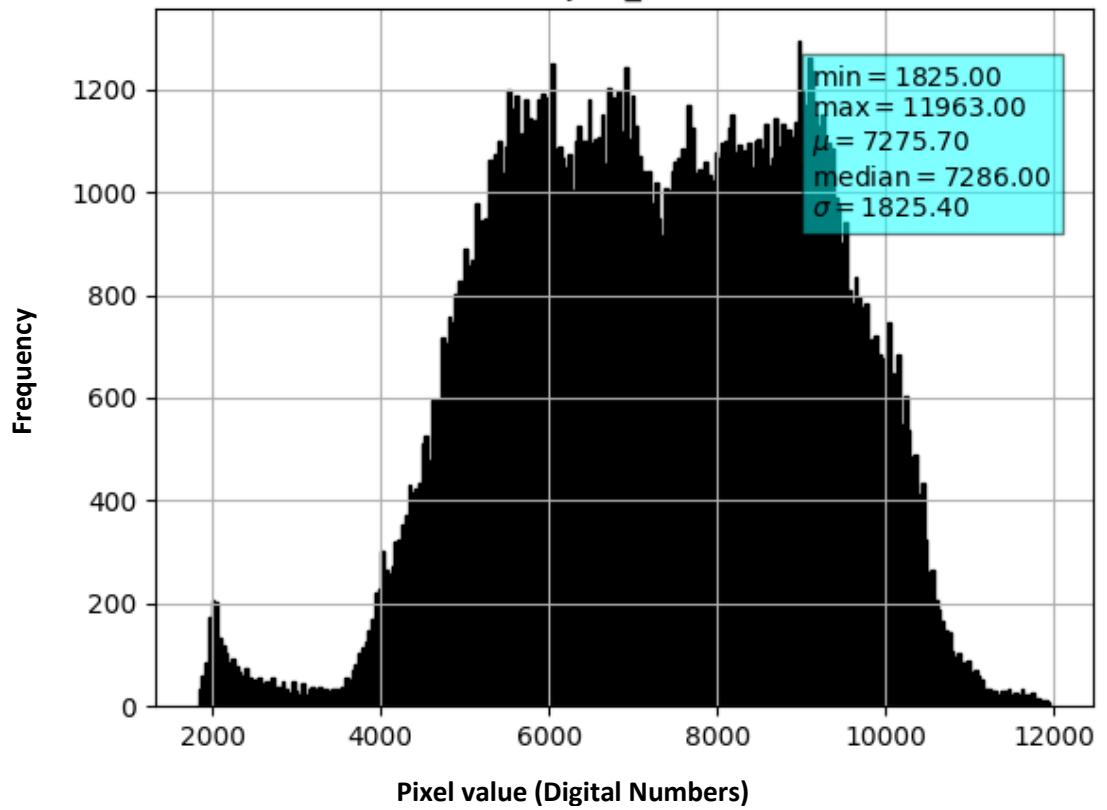
2.5.5.11



Id 12

2.5.5.12

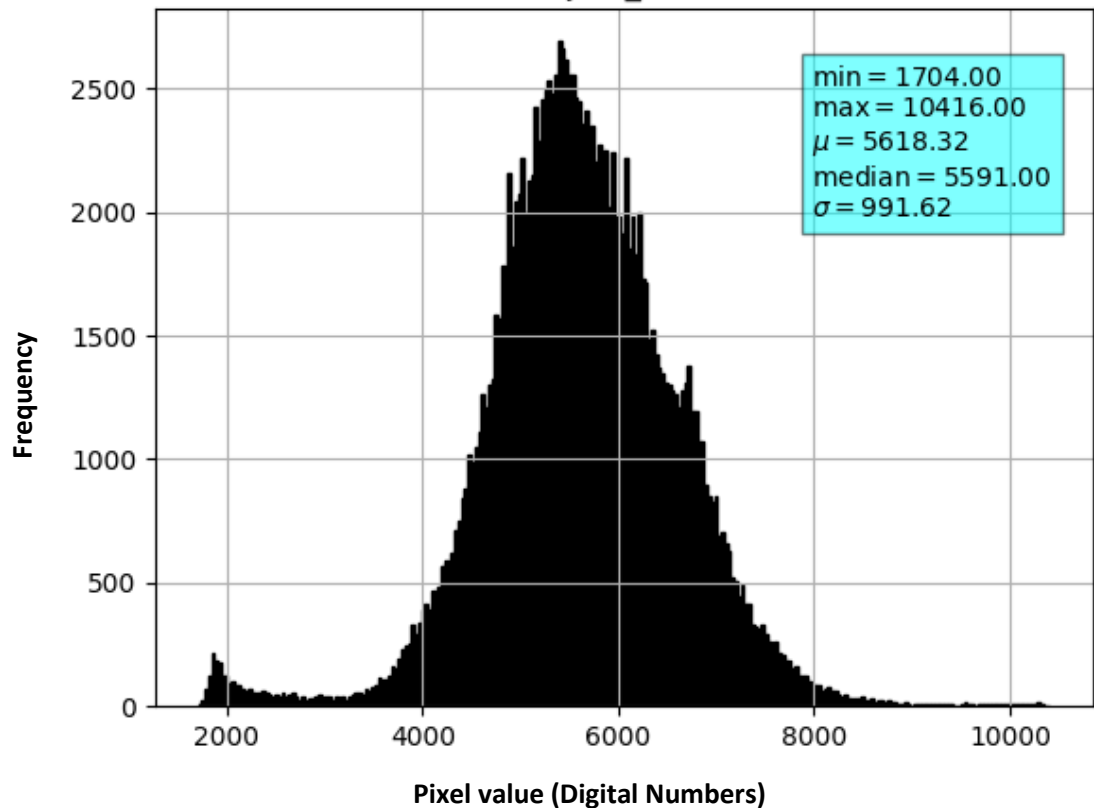
3289167_3159222_2020-04-04_2259_Band5
object_id : 12



Id 13

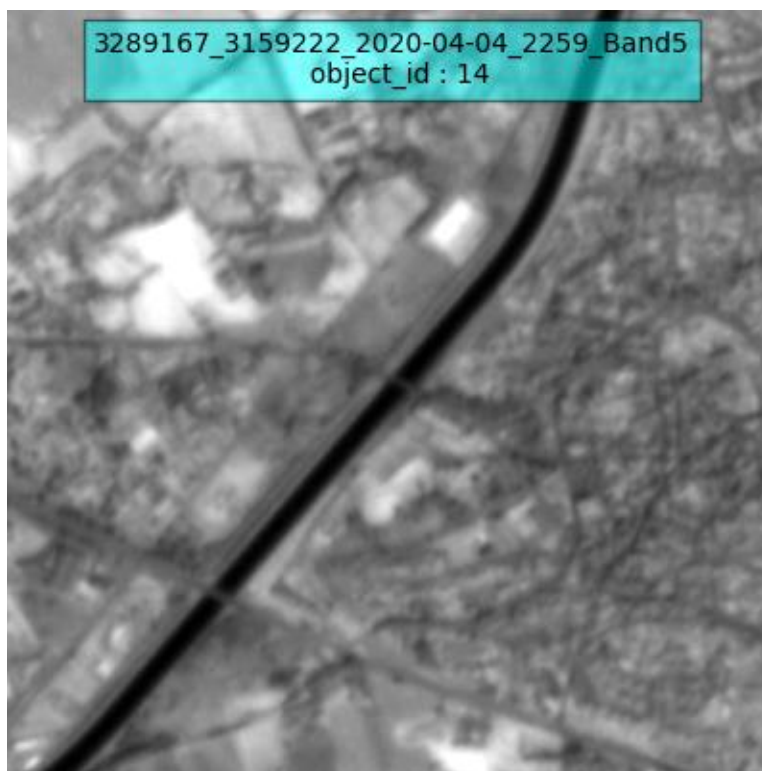
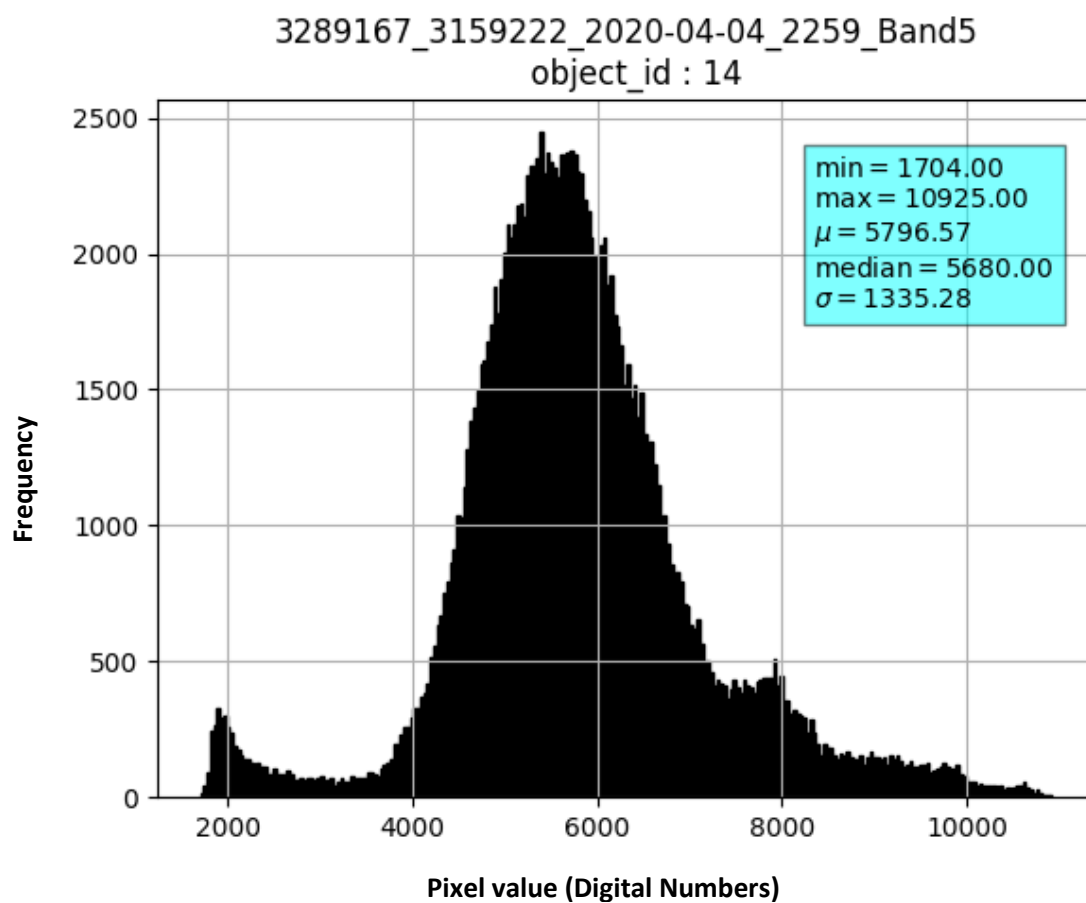
3289167_3159222_2020-04-04_2259_Band5
object_id : 13

2.5.5.13



Id 14

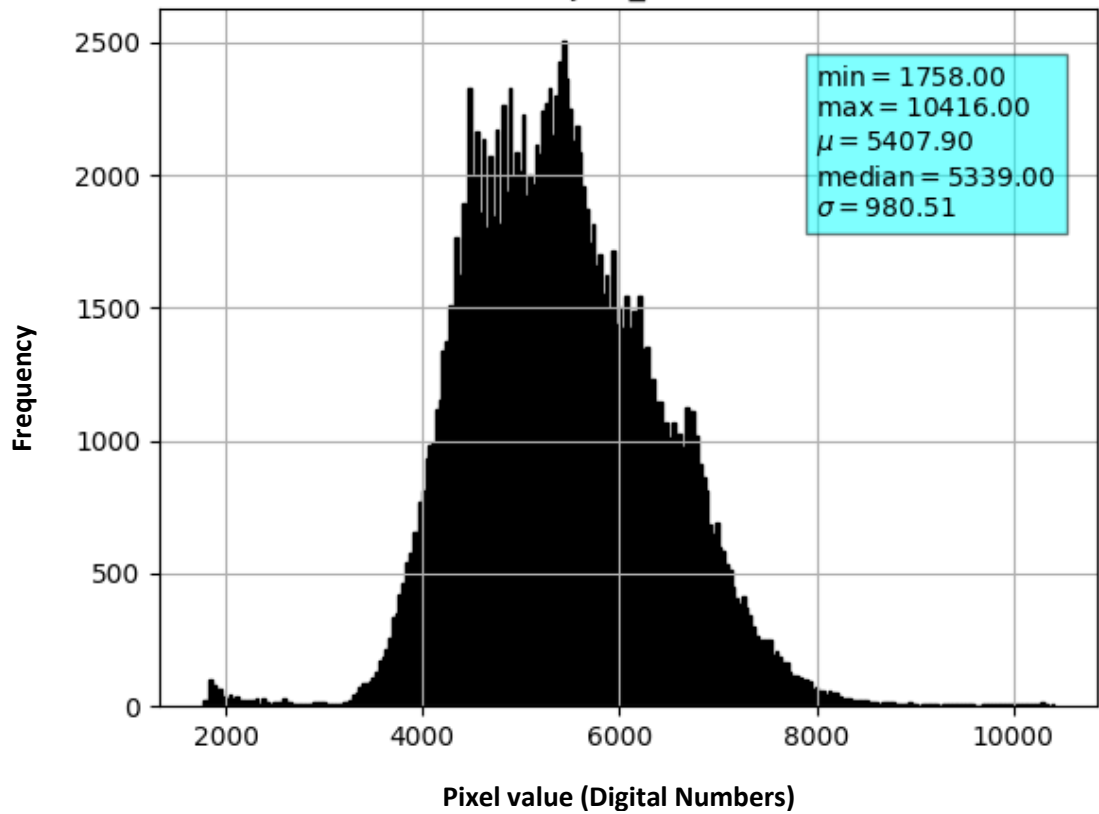
2.5.5.14



Id 15

3289167_3159222_2020-04-04_2259_Band5
object_id : 15

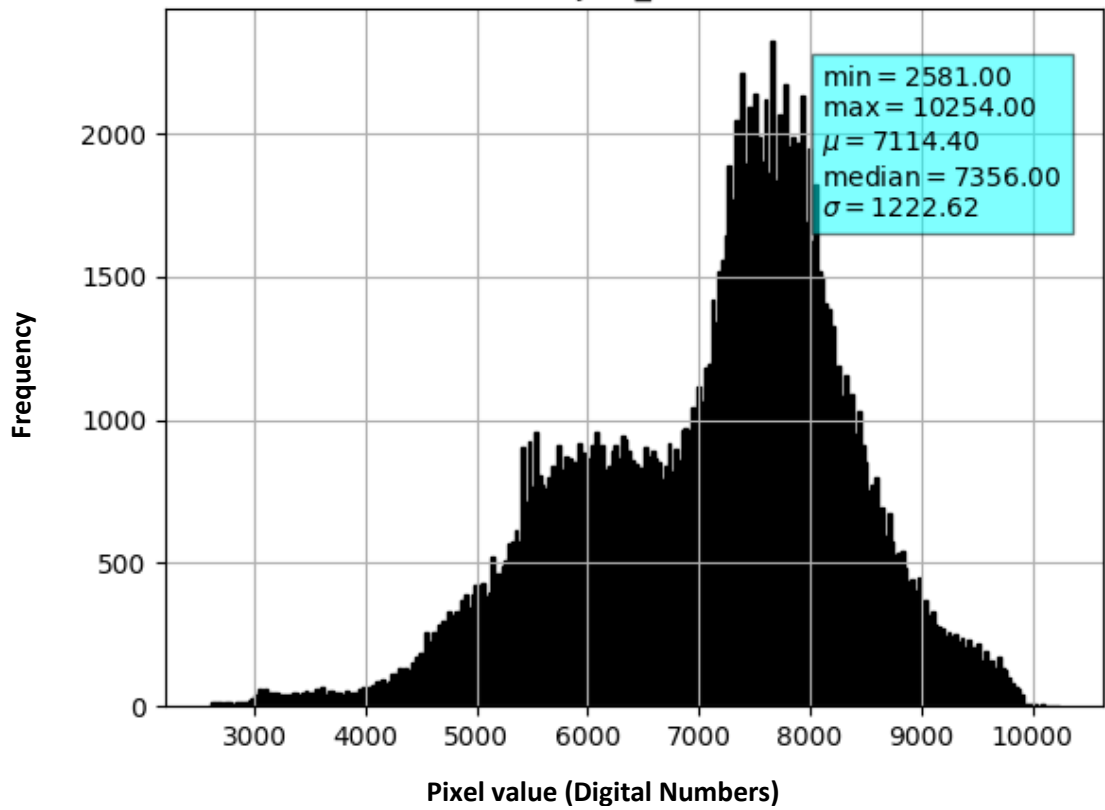
2.5.5.15



Id 16

3289167_3159222_2020-04-04_2259_Band5
object_id : 16

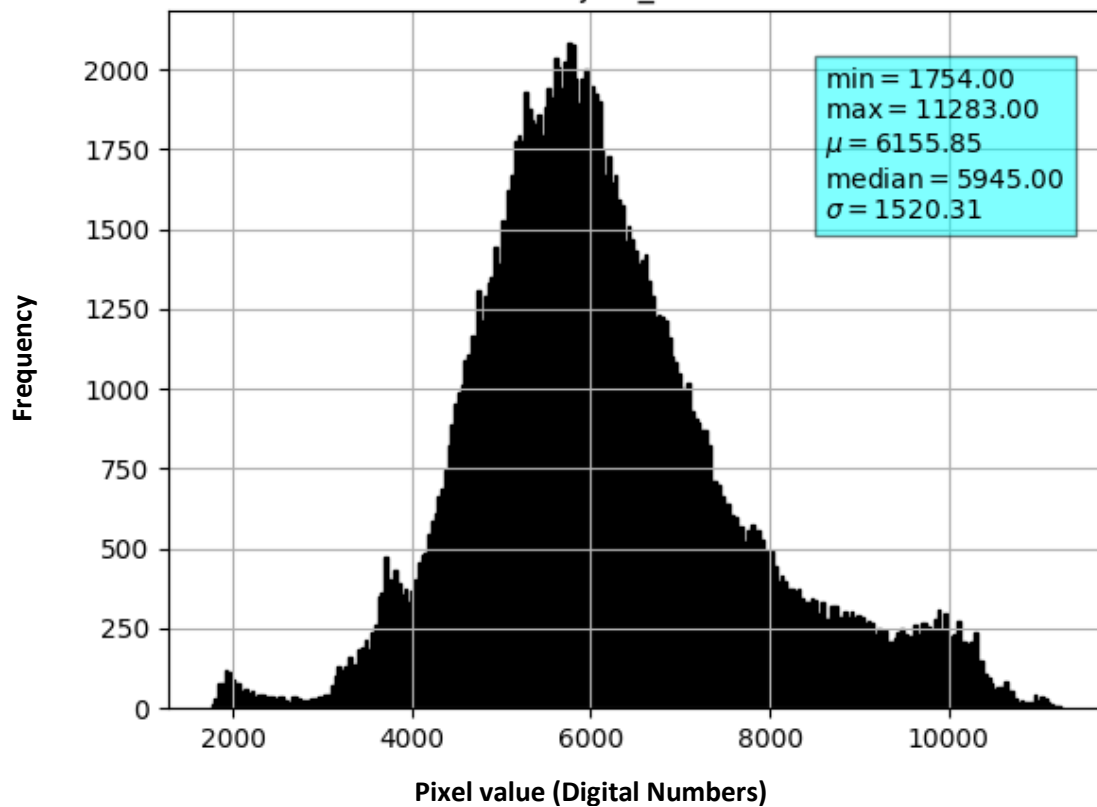
2.5.5.16



Id 17

3289167_3159222_2020-04-04_2259_Band5
object_id : 17

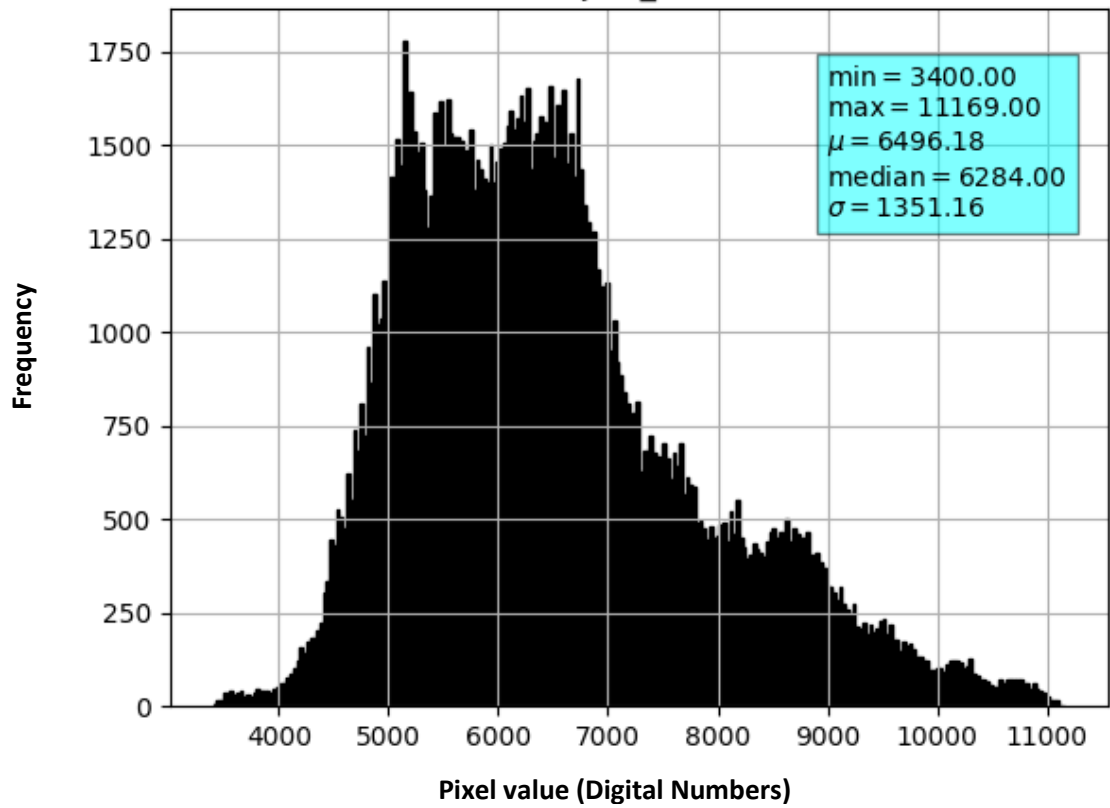
2.5.5.17



Id 18

3289167_3159222_2020-04-04_2259_Band5
object_id : 18

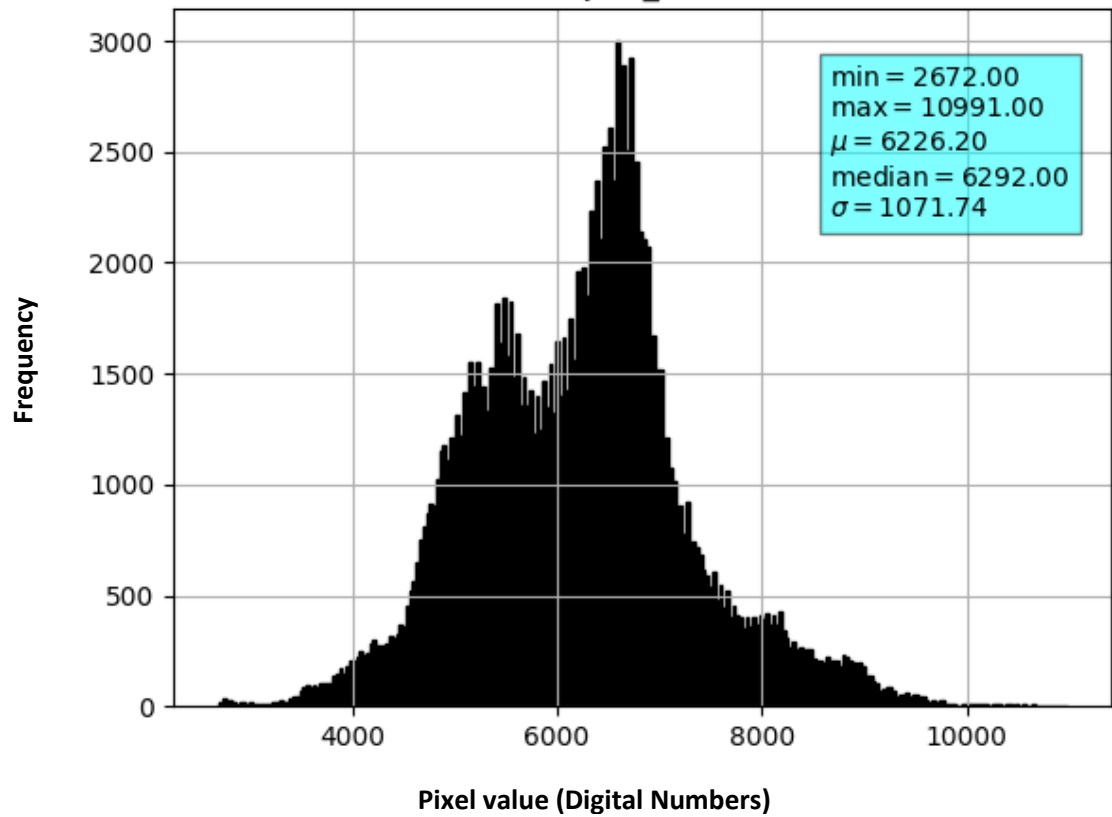
2.5.5.18



Id 19

2.5.5.19

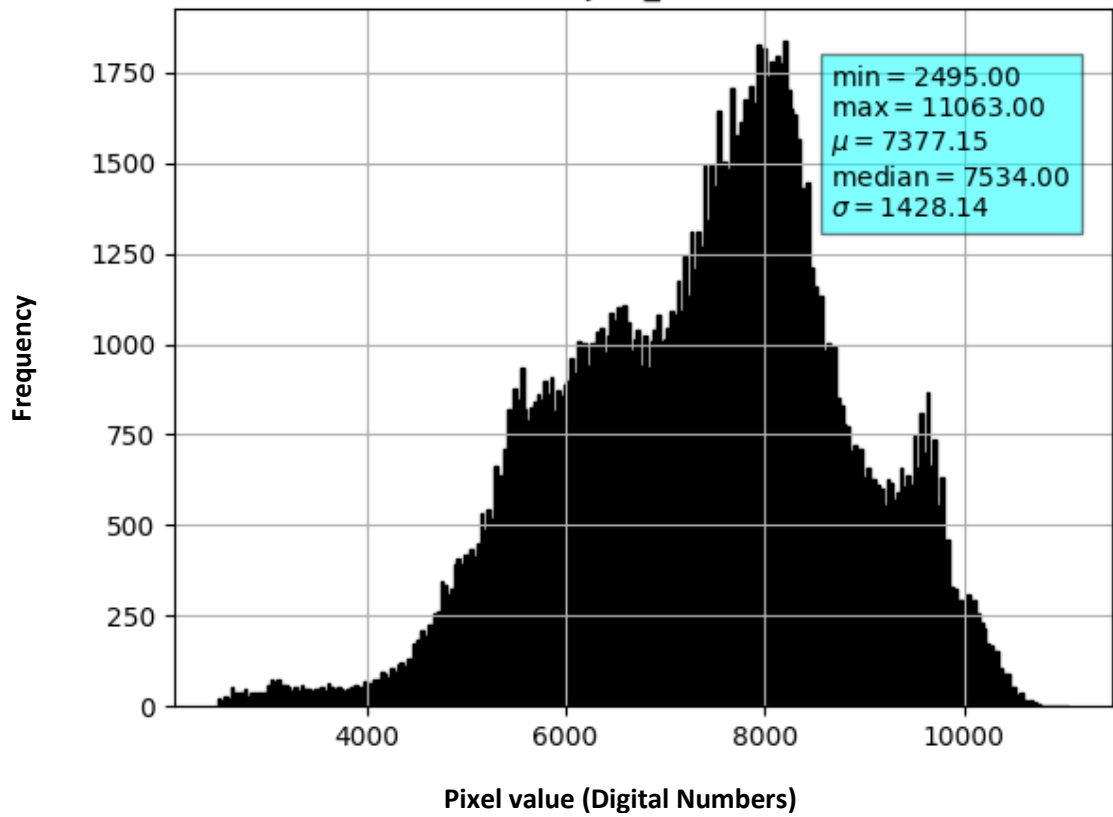
3289167_3159222_2020-04-04_2259_Band5
object_id : 19



Id 20

3289167_3159222_2020-04-04_2259_Band5
object_id : 20

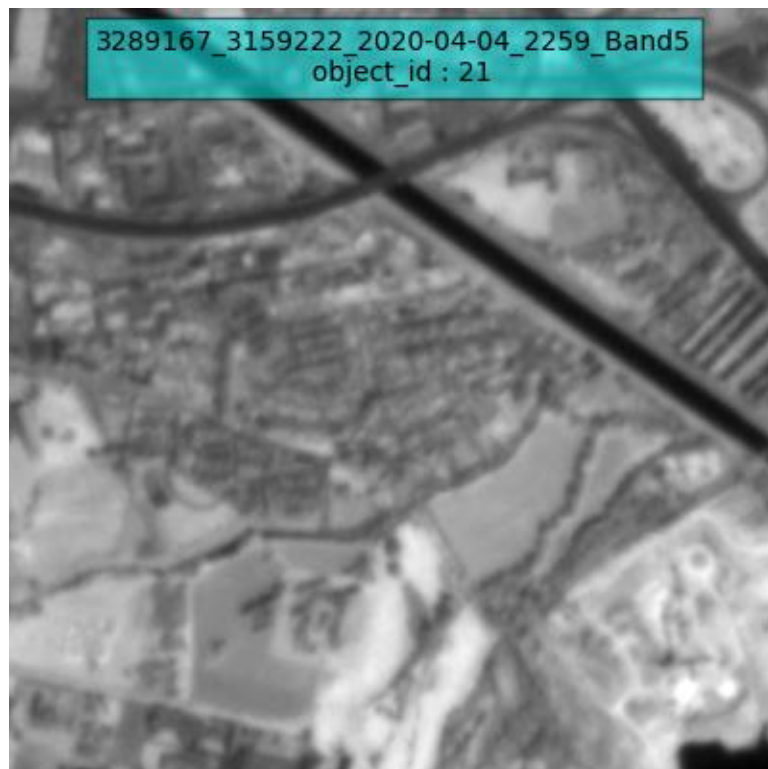
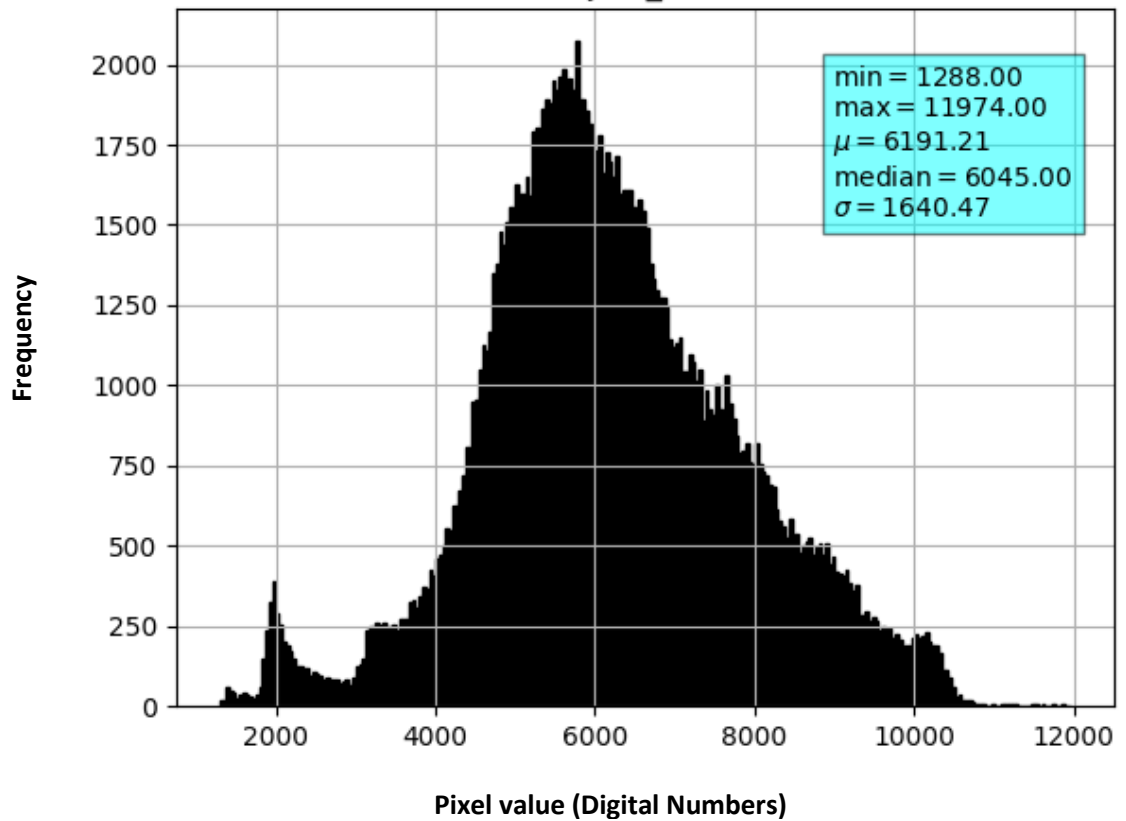
2.5.5.20



Id 21

3289167_3159222_2020-04-04_2259_Band5
object_id : 21

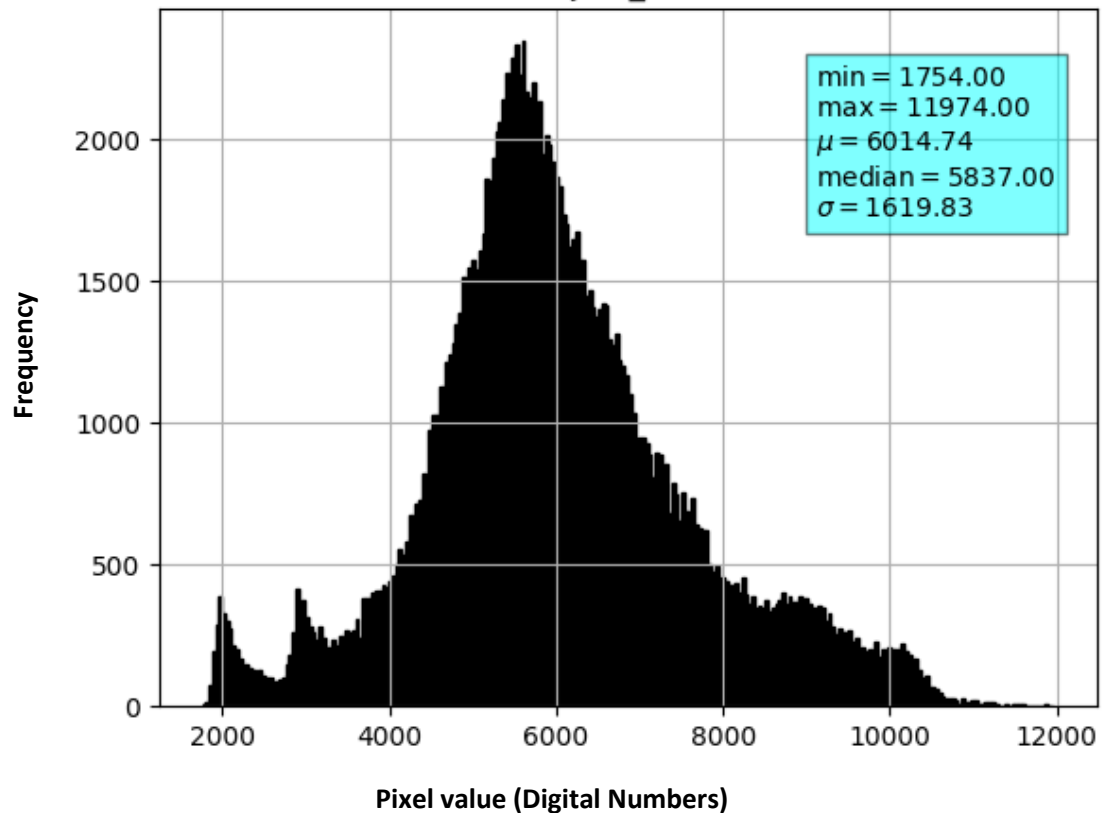
2.5.5.21



Id 22

3289167_3159222_2020-04-04_2259_Band5
object_id : 22

2.5.5.22



PHR – Blue Band

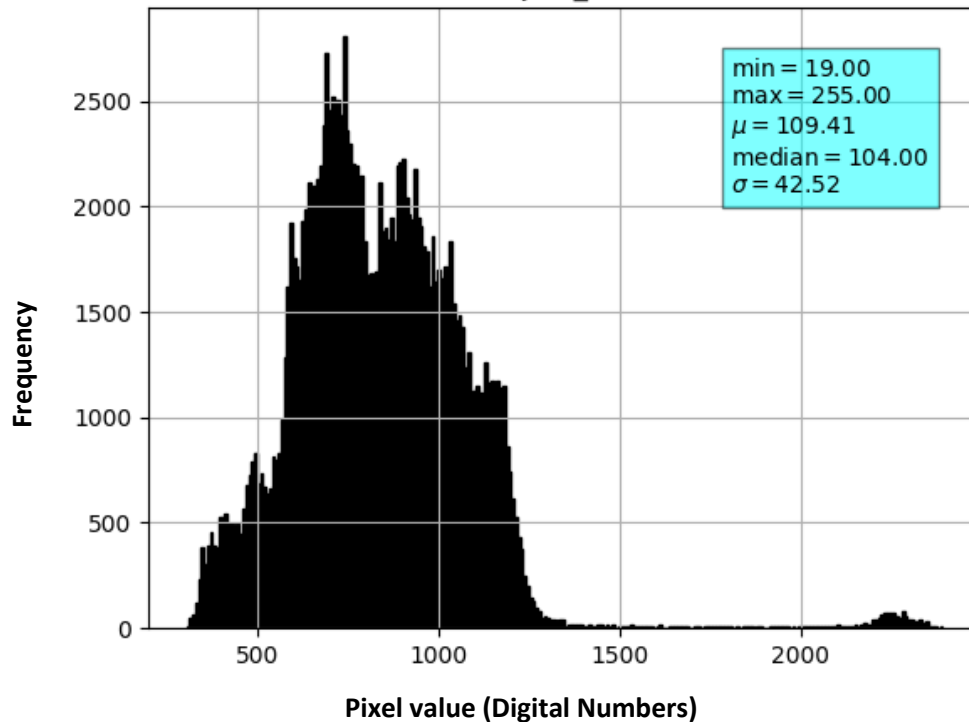
Pleiades information below is given at nominal resolution for the histograms, and a resolution downscale by a factor of 3 for the images.

Id 01

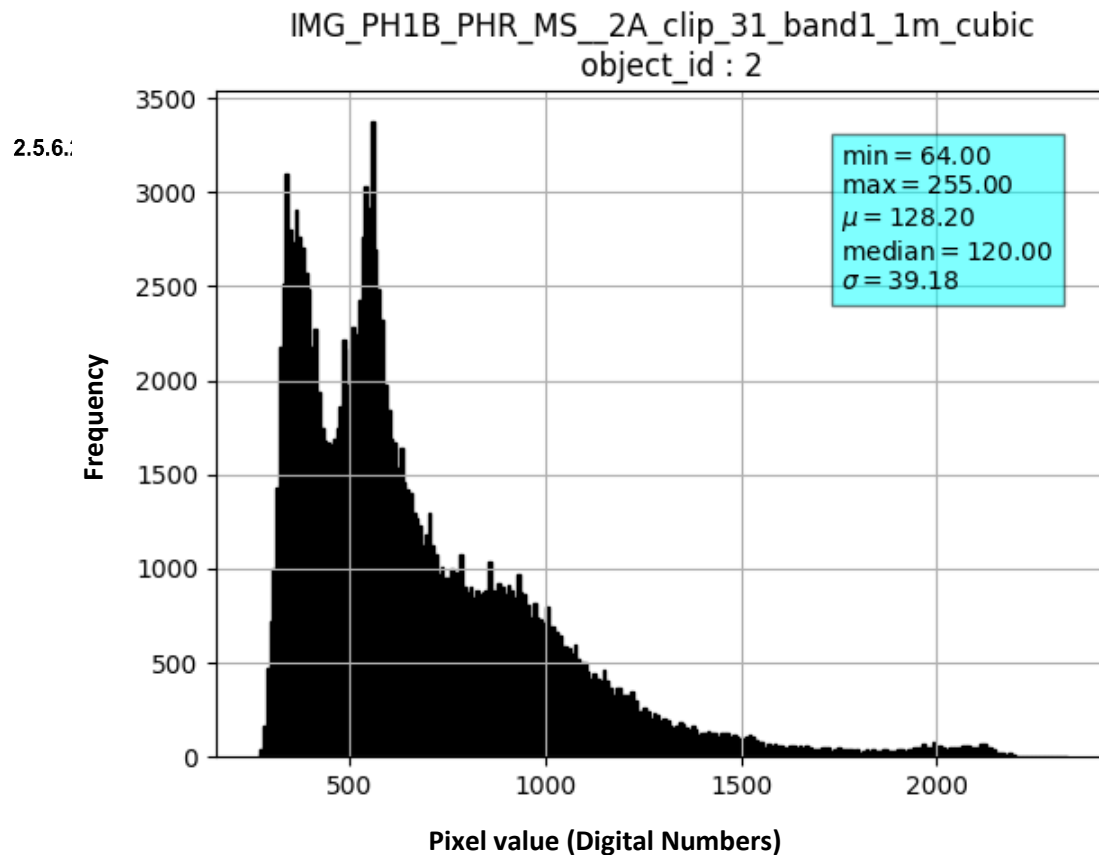
2.5.6

IMG_PH1B_PHR_MS_2A_clip_31_band1_1m_cubic
object_id : 1

2.5.6.1

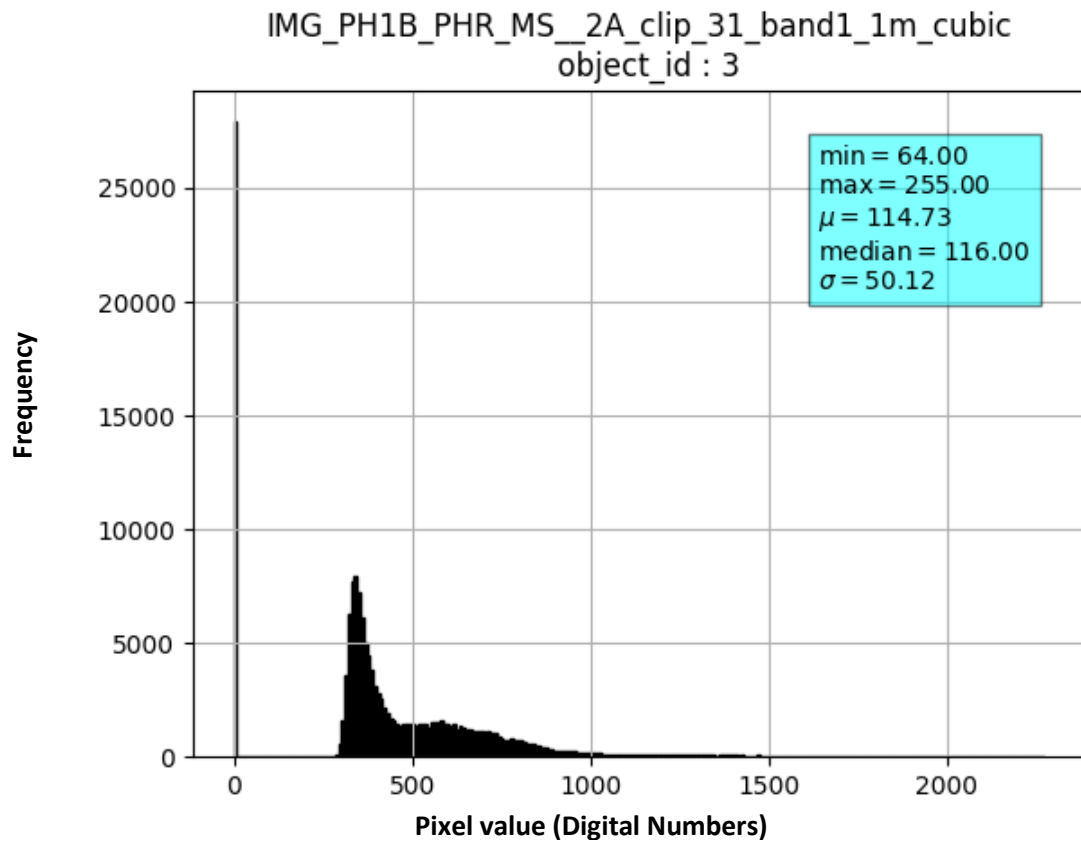


Id 02



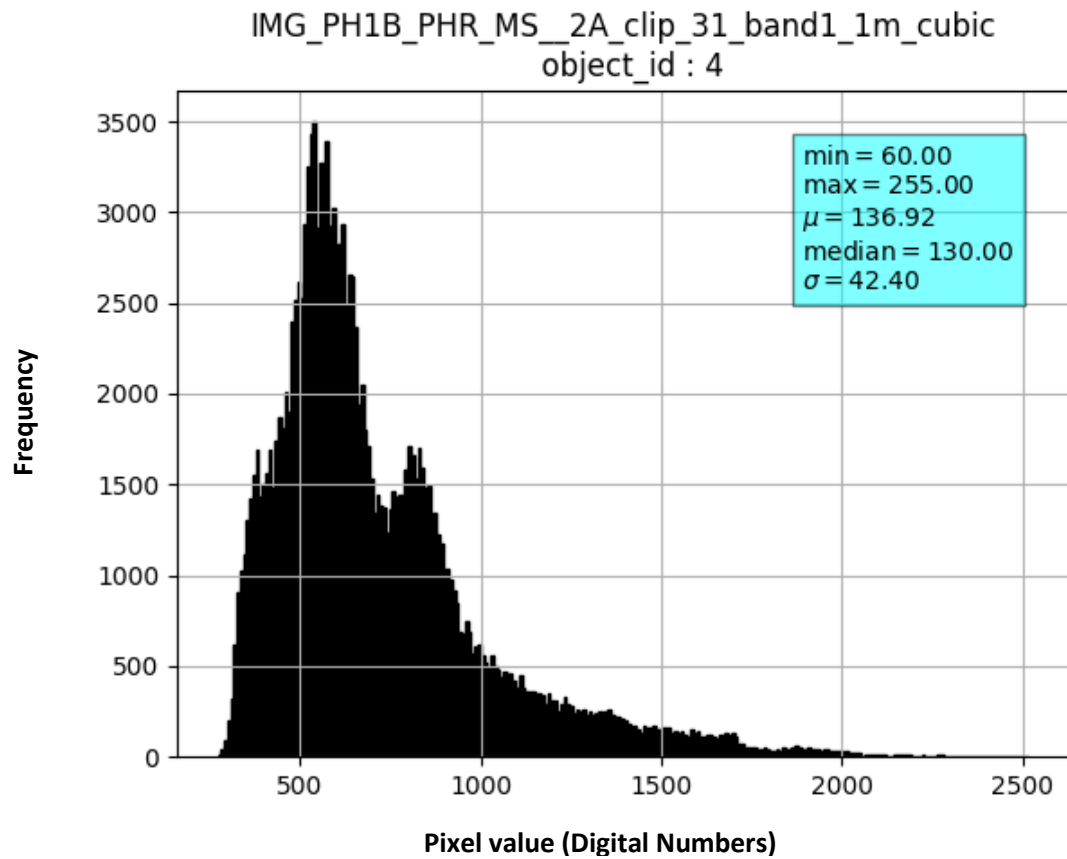
Id 03

2.5.6.3



Id 04

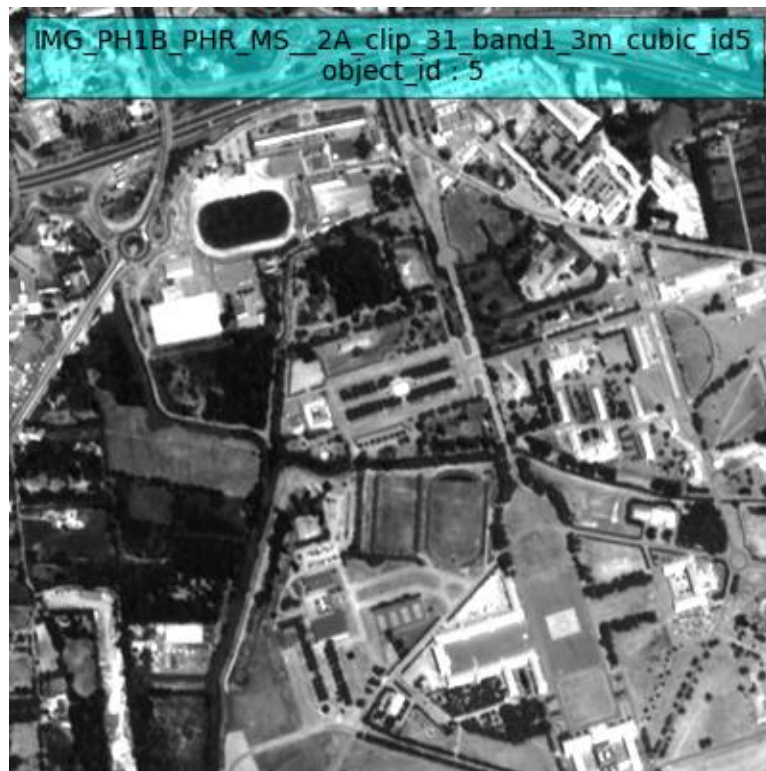
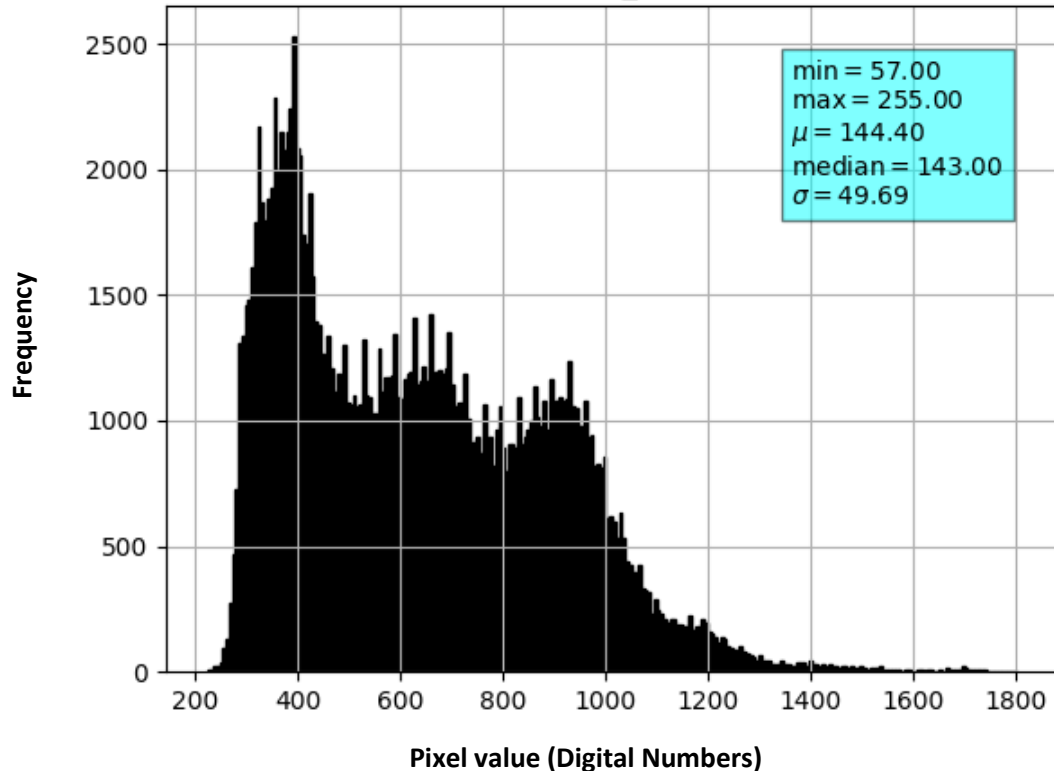
2.5.6.4



Id 05

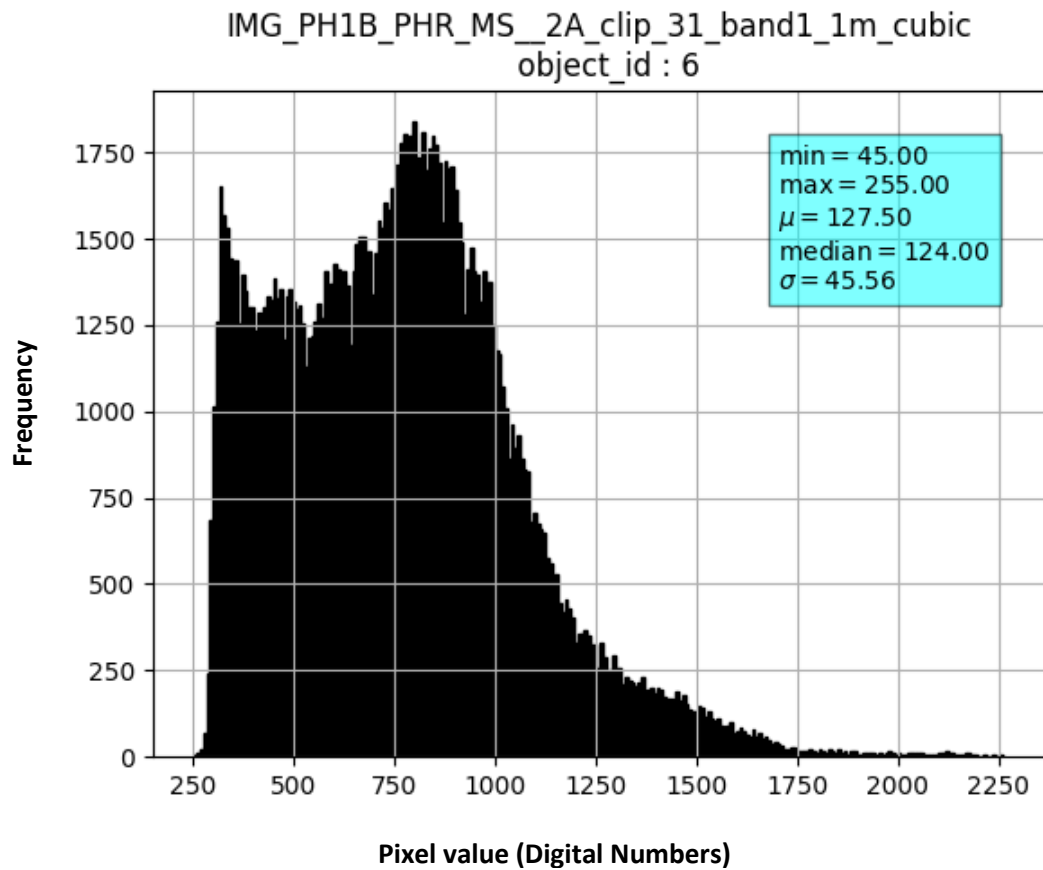
2.5.6.5

IMG_PH1B_PHR_MS_2A_clip_31_band1_1m_cubic
object_id : 5



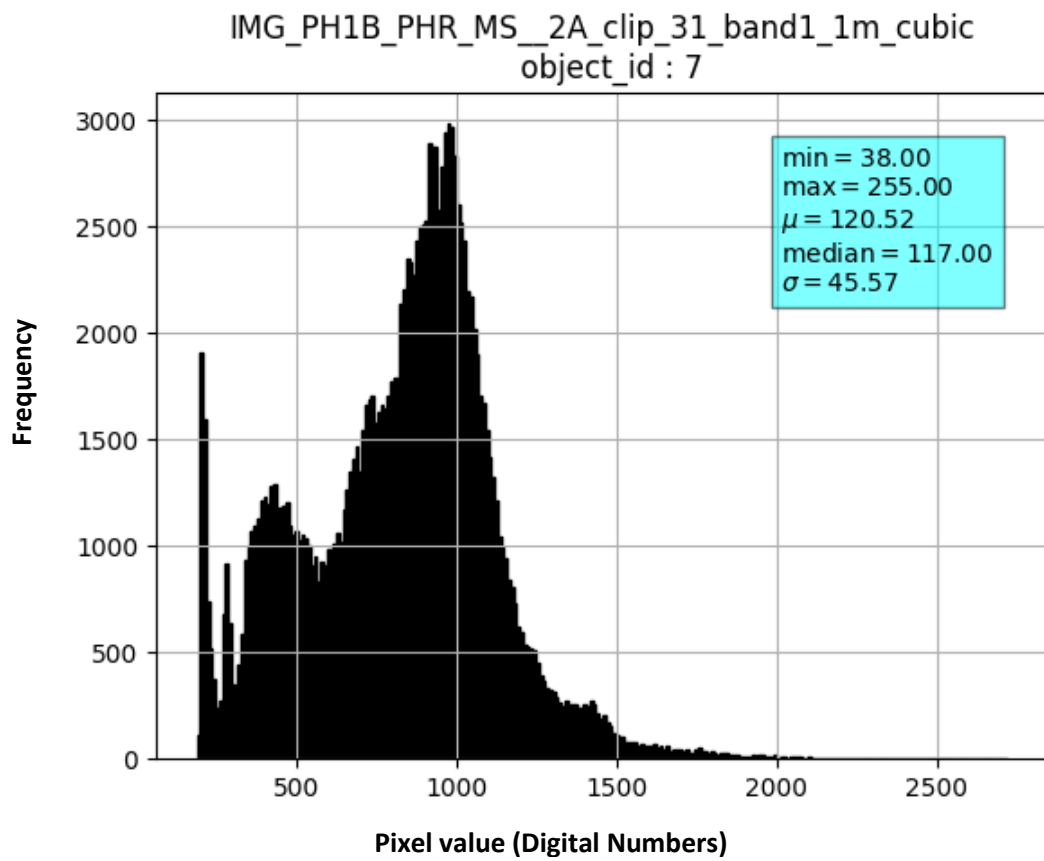
Id 06

2.5.6.6



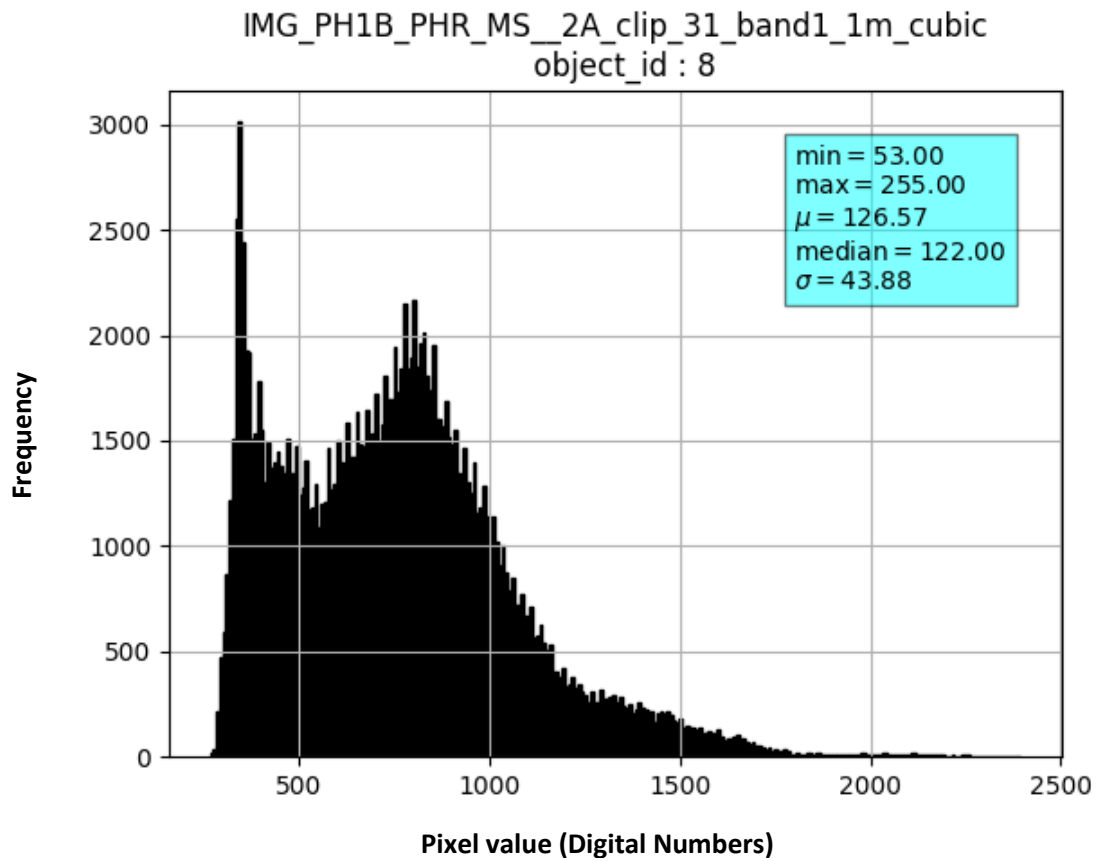
Id 07

2.5.6.7



Id 08

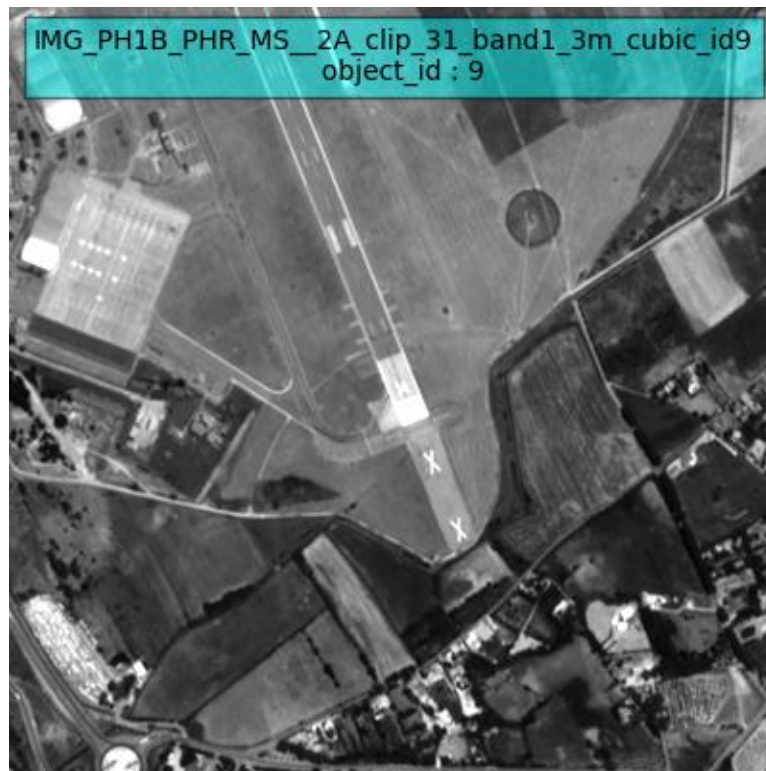
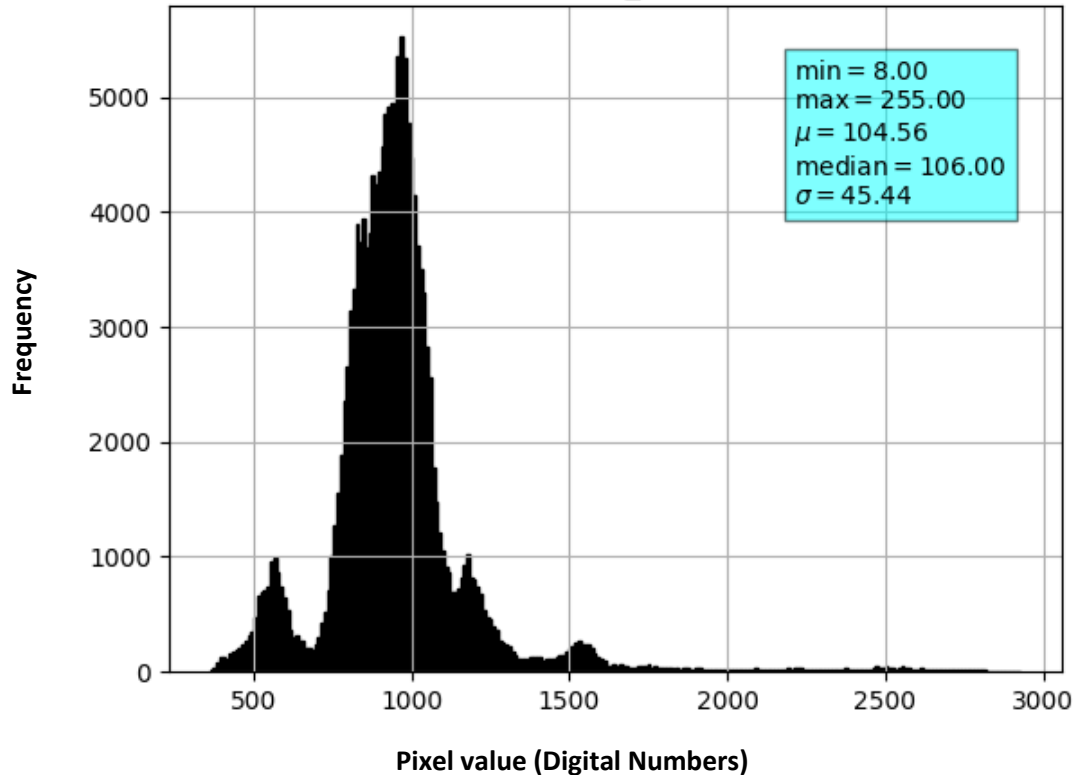
2.5.6.8



Id 09

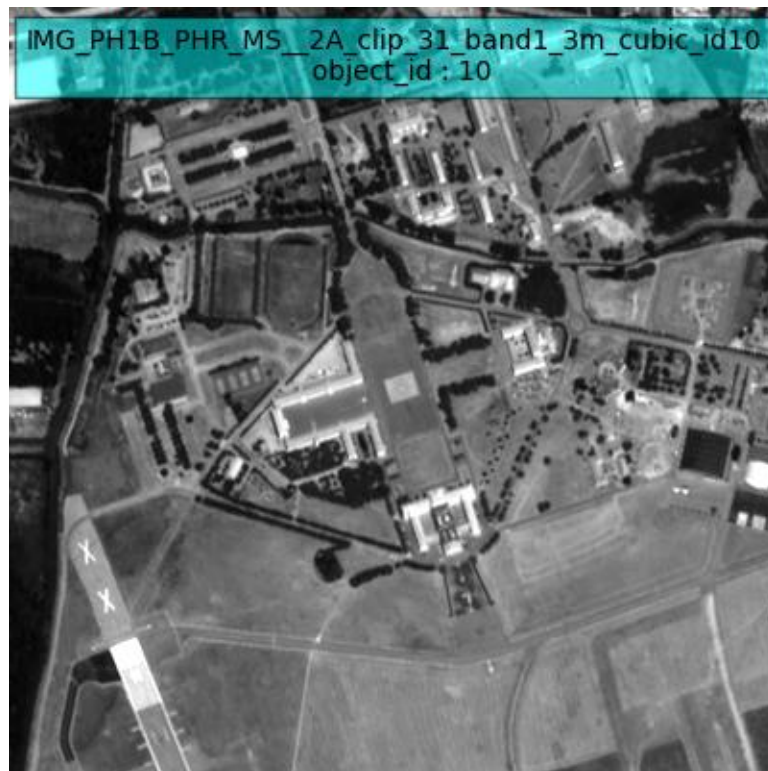
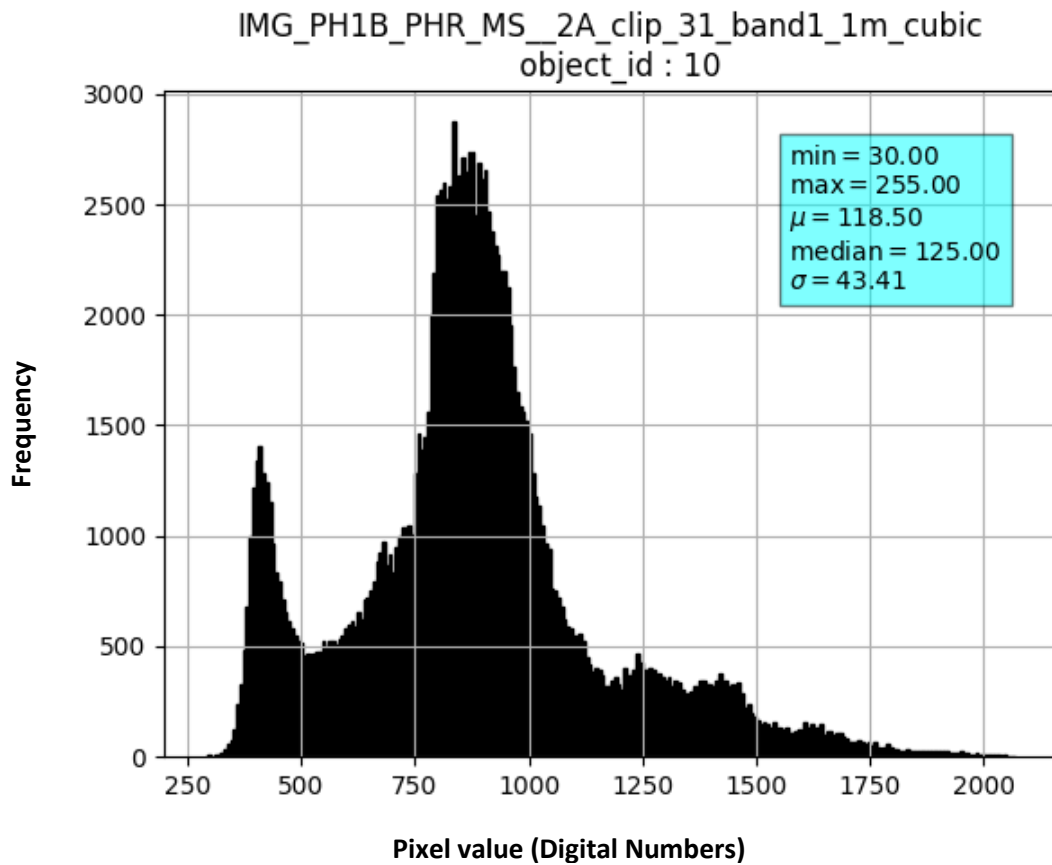
2.5.6.9

IMG_PH1B_PHR_MS_2A_clip_31_band1_1m_cubic
object_id : 9



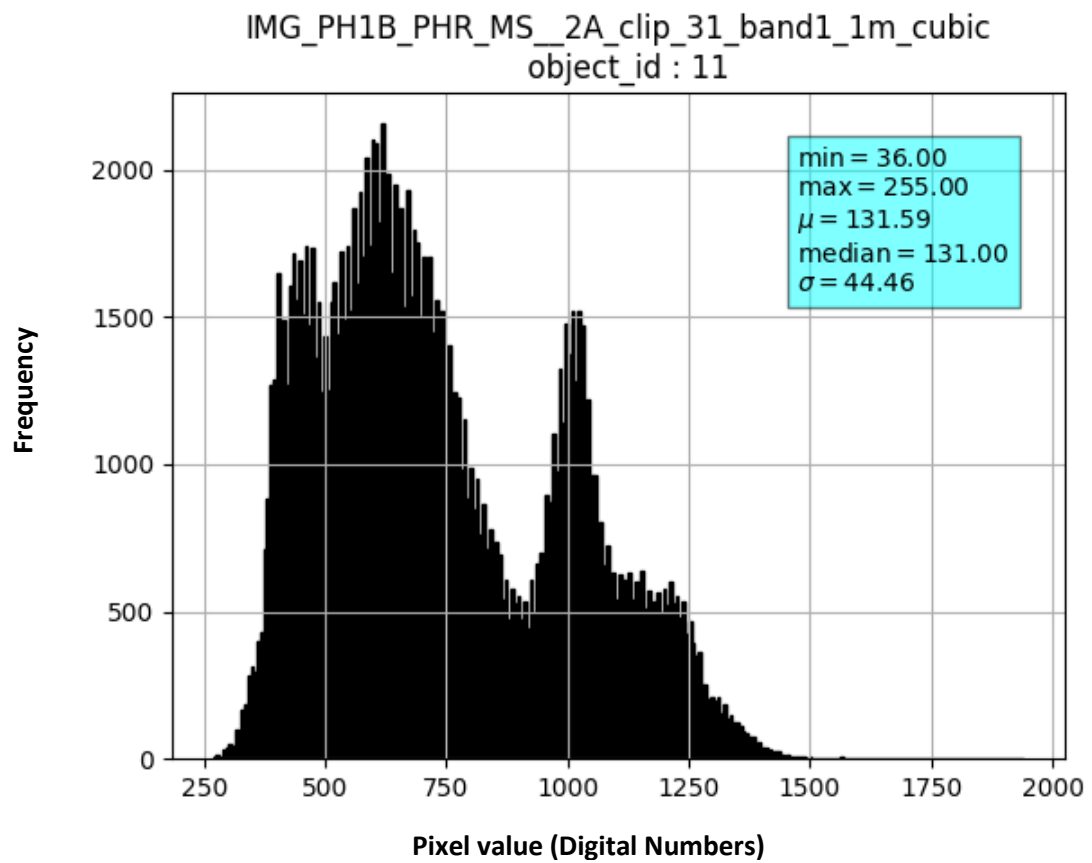
Id 10

2.5.6.10



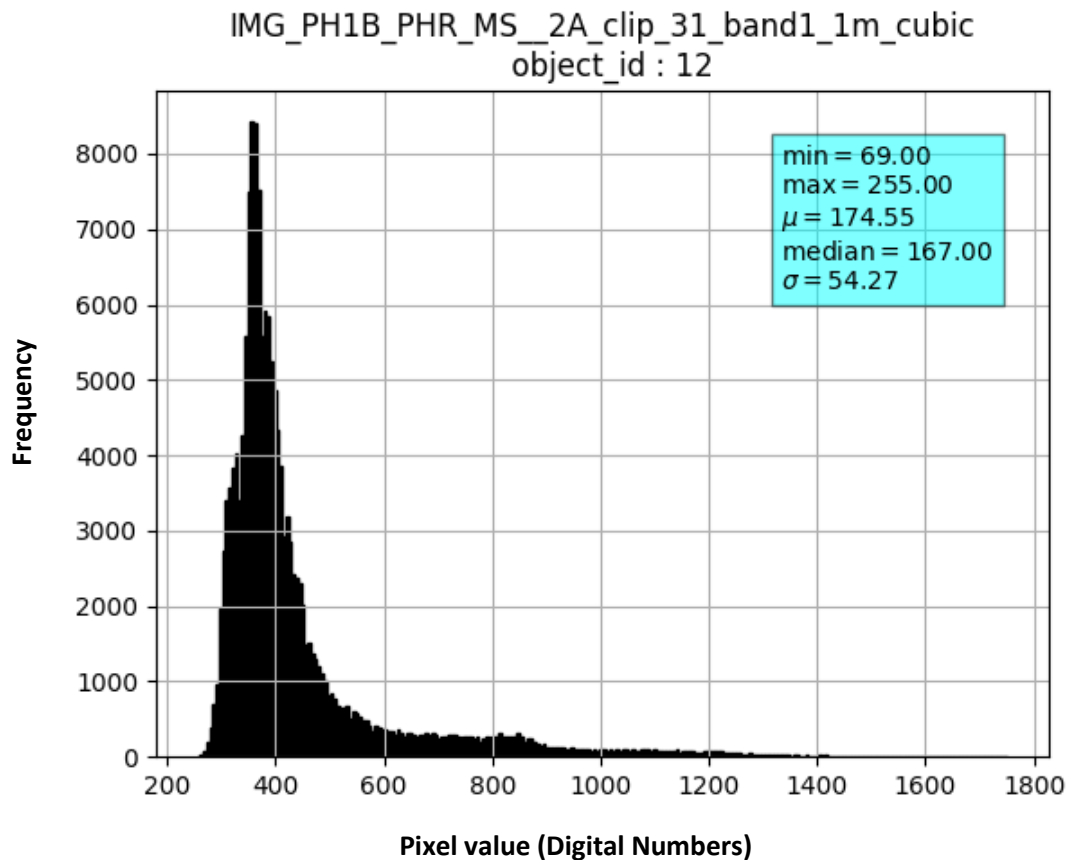
Id 11

2.5.6.11



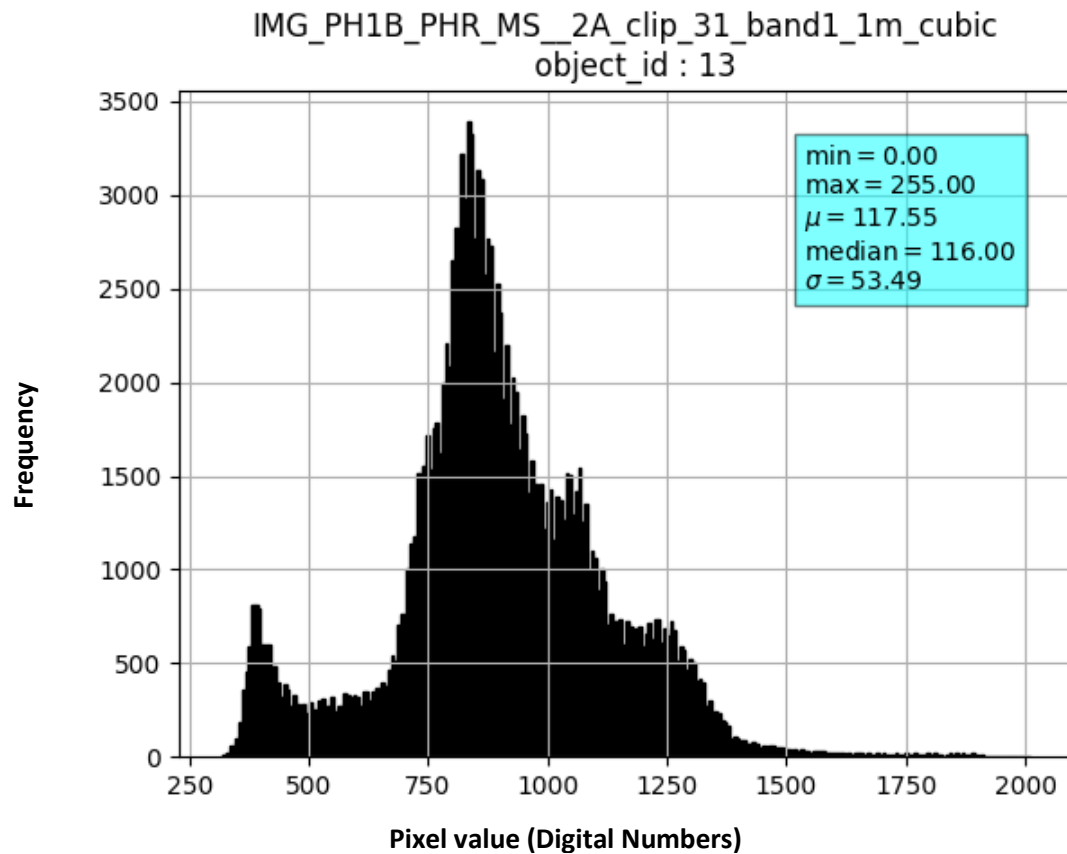
Id 12

2.5.6.12



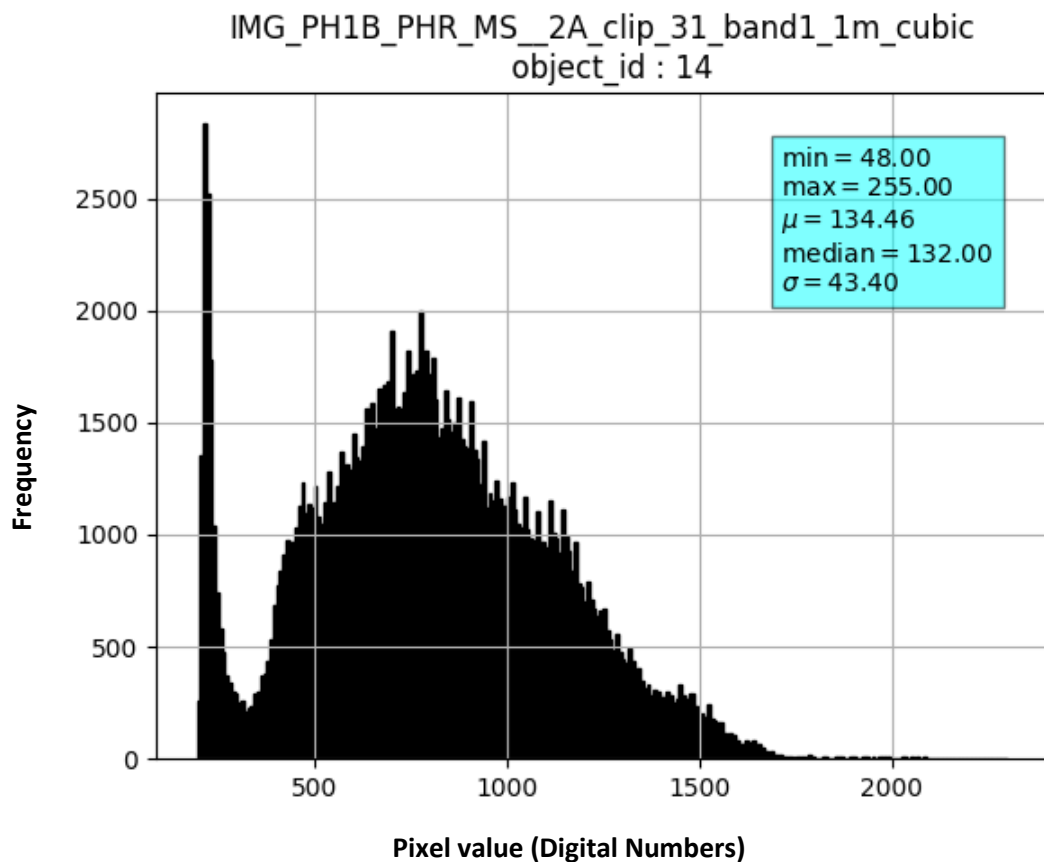
Id 13

2.5.6.13



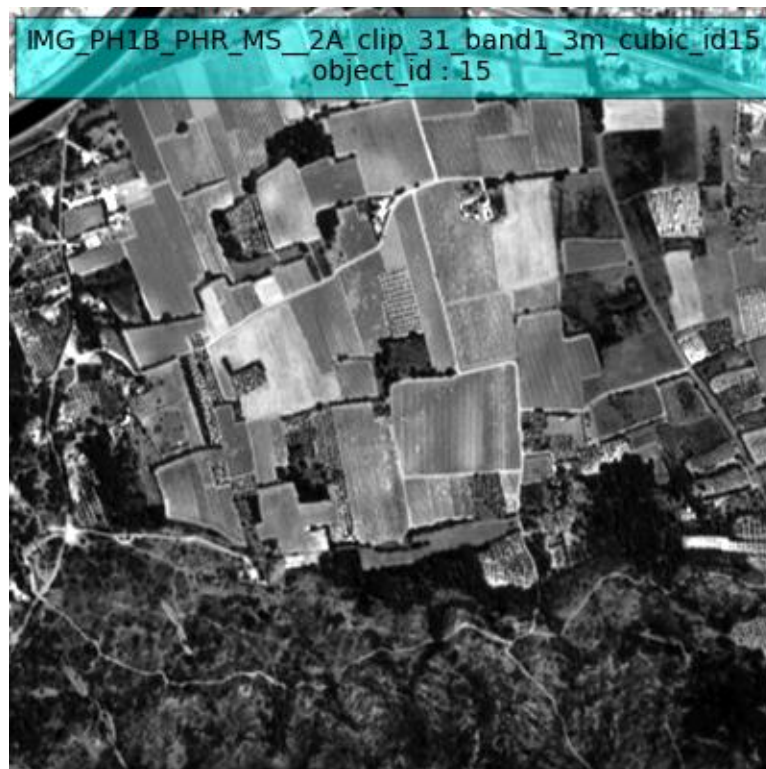
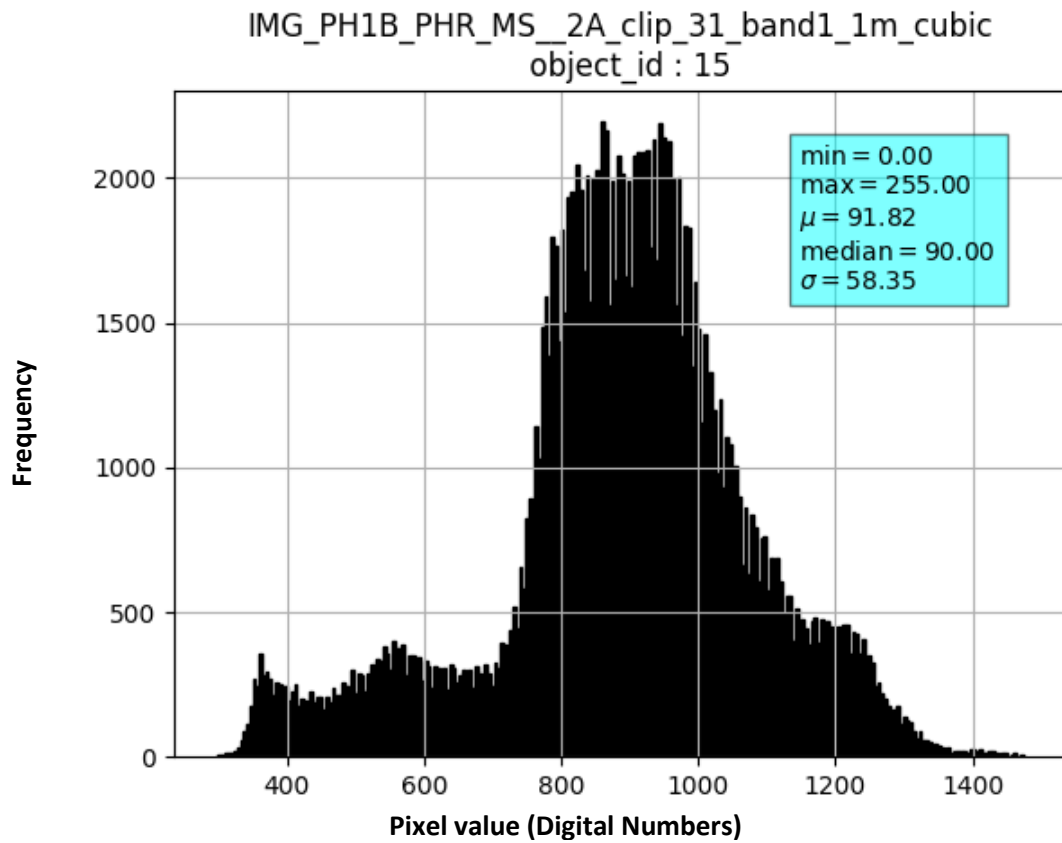
Id 14

2.5.6.14



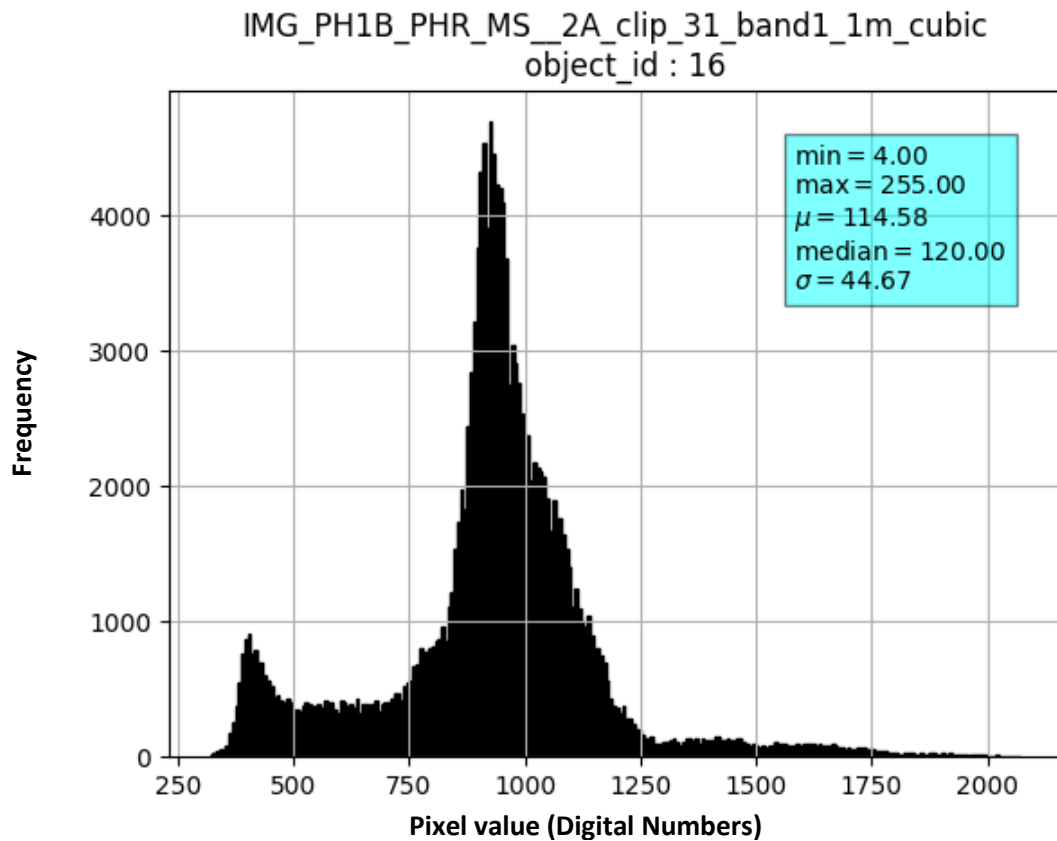
Id 15

2.5.6.15



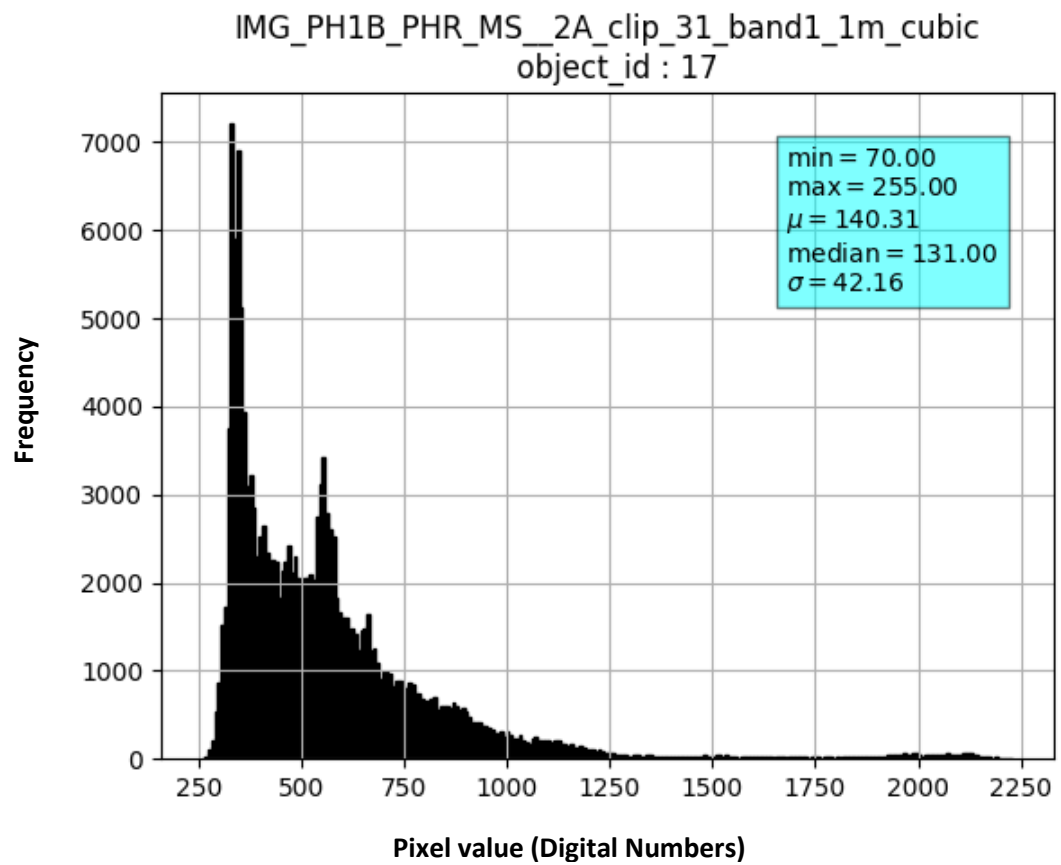
Id 16

2.5.6.16



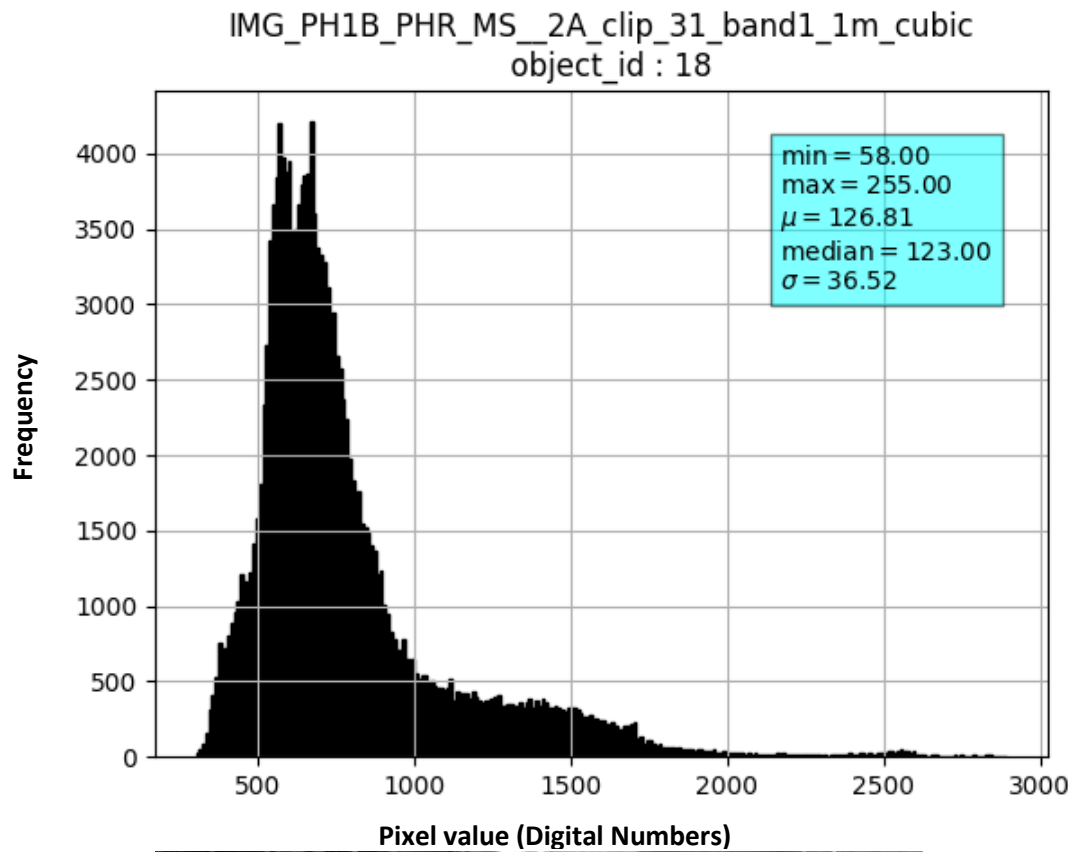
Id 17

2.5.6.17



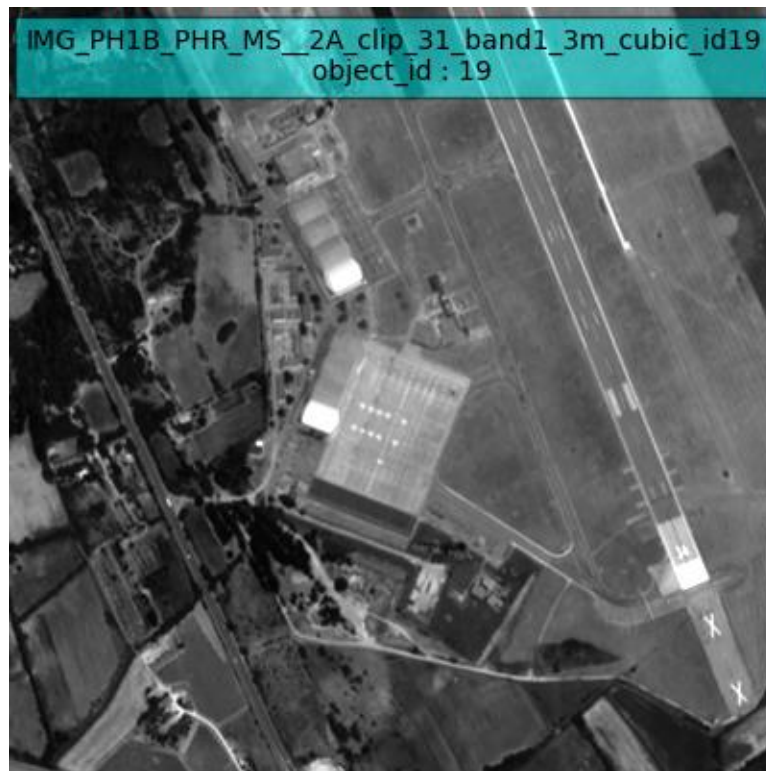
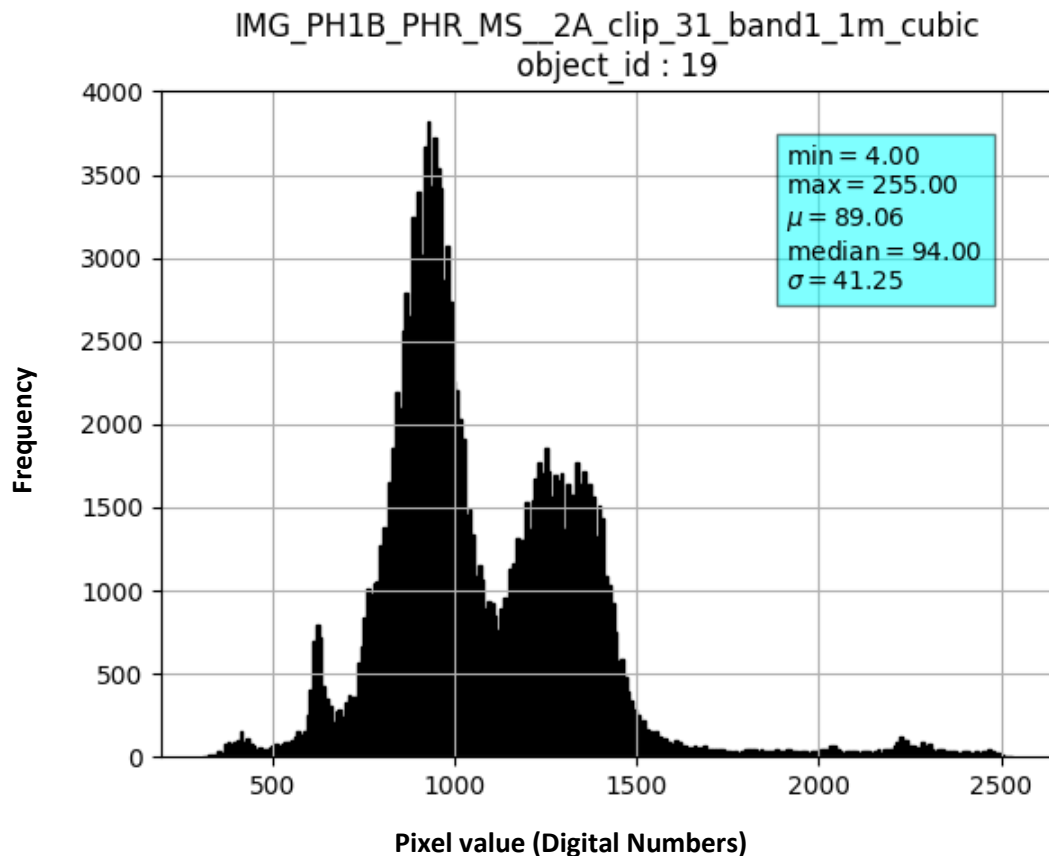
Id 18

2.5.6.18



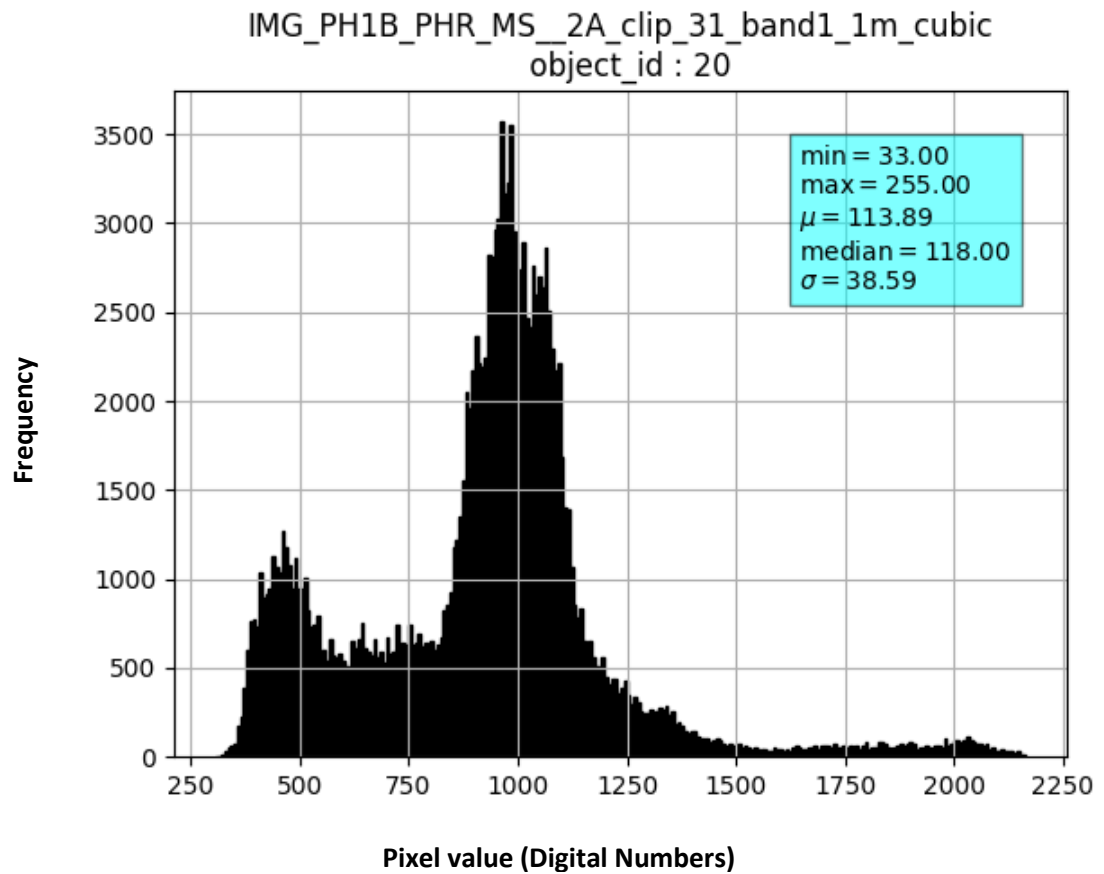
Id 19

2.5.6.19



Id 20

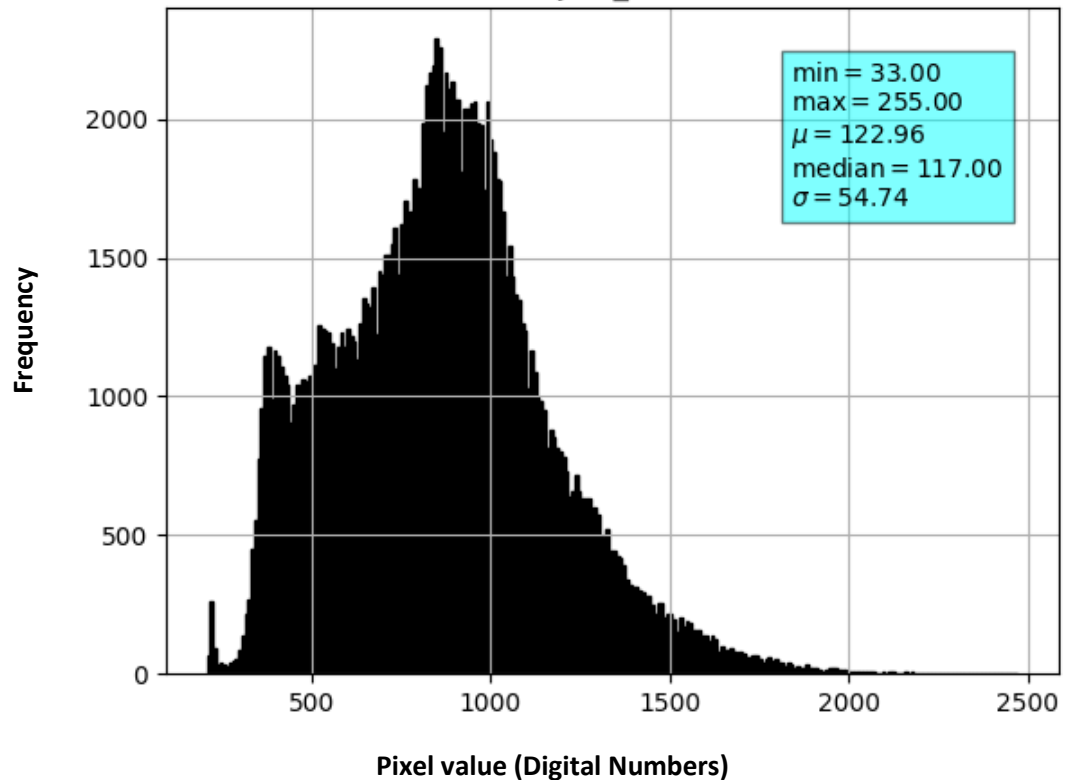
2.5.6.20



Id 21

2.5.6.21

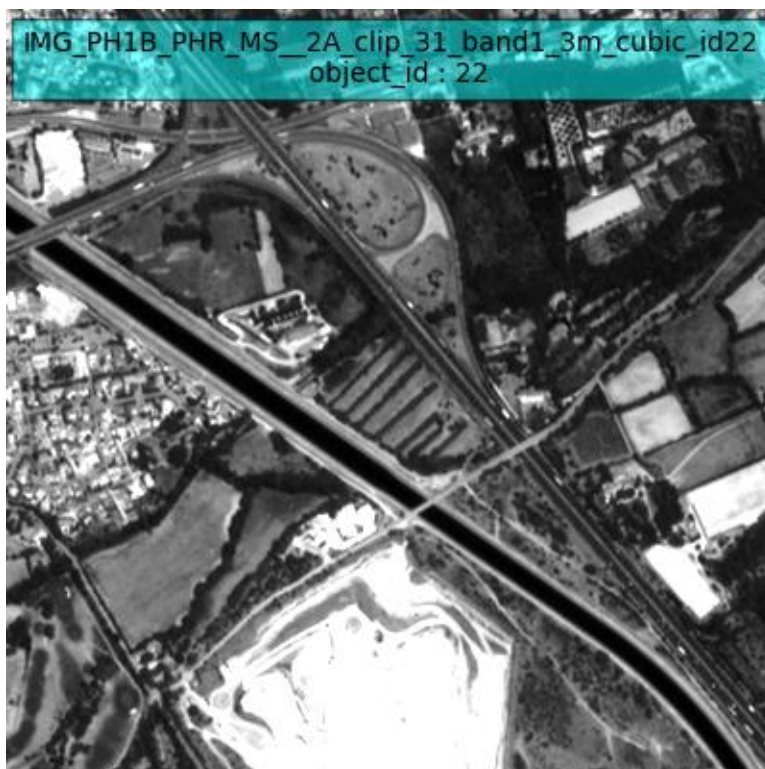
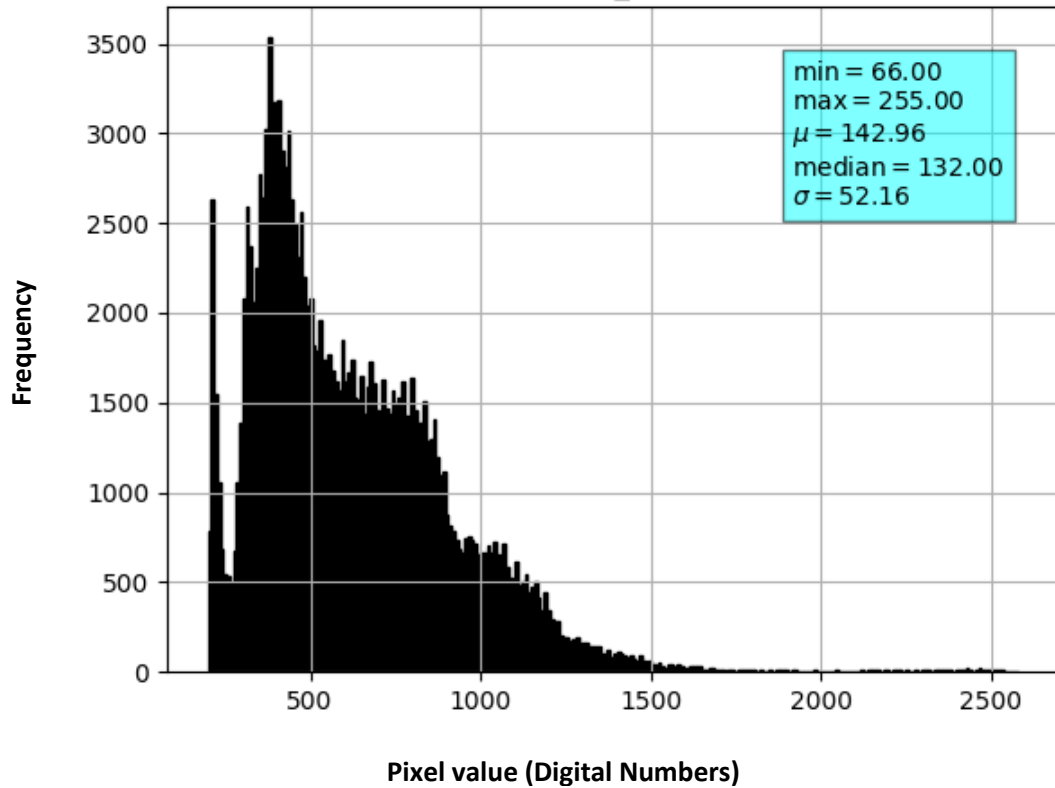
IMG_PH1B_PHR_MS_2A_clip_31_band1_1m_cubic
object_id : 21



Id 22

2.5.6.22

IMG_PH1B_PHR_MS_2A_clip_31_band1_1m_cubic
object_id : 22



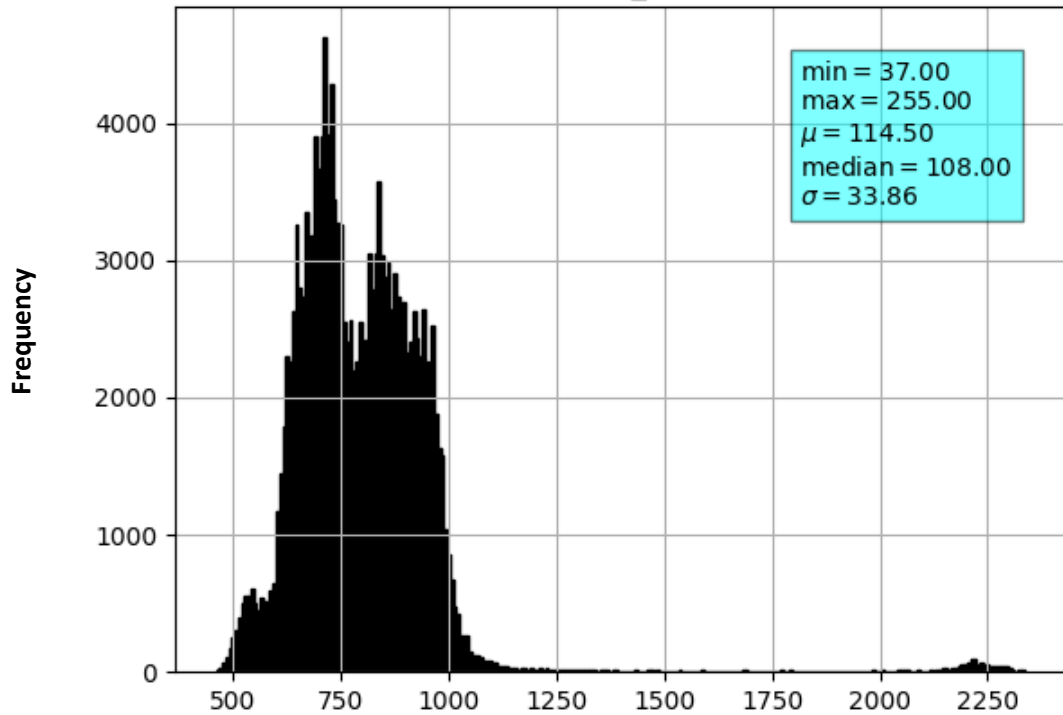
PHR – Green Band

Id 01

2.5.7

2.5.7.1

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 1



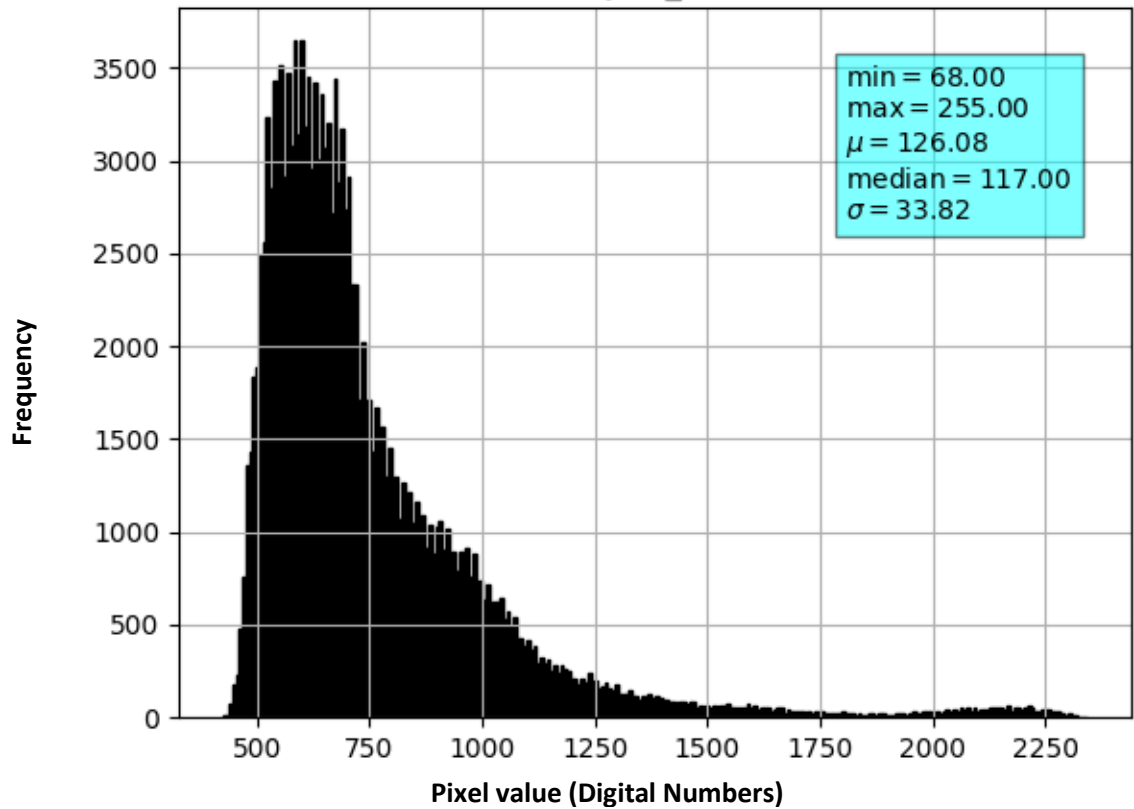
Pixel value (Digital Numbers)



Id 02

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 2

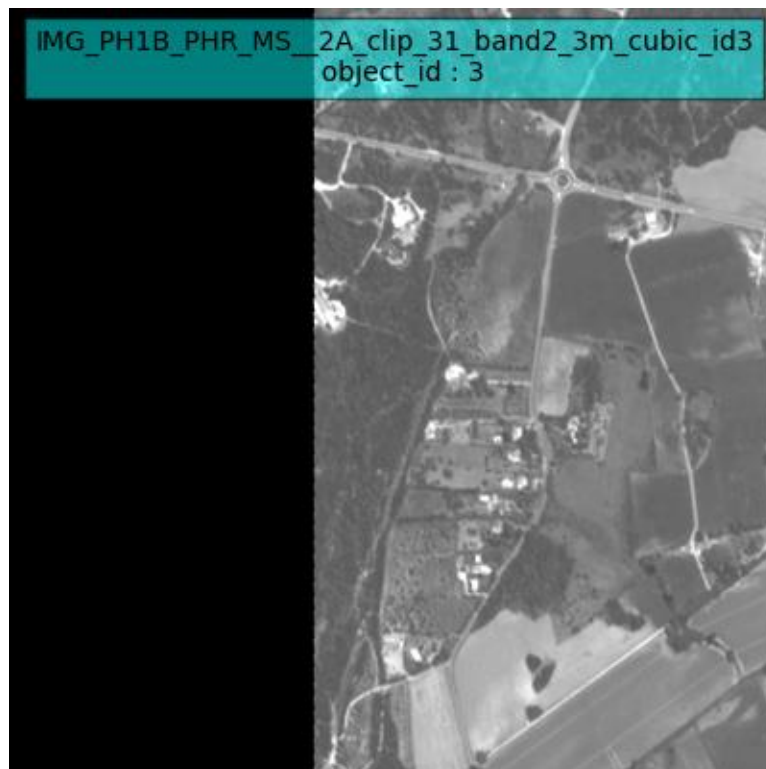
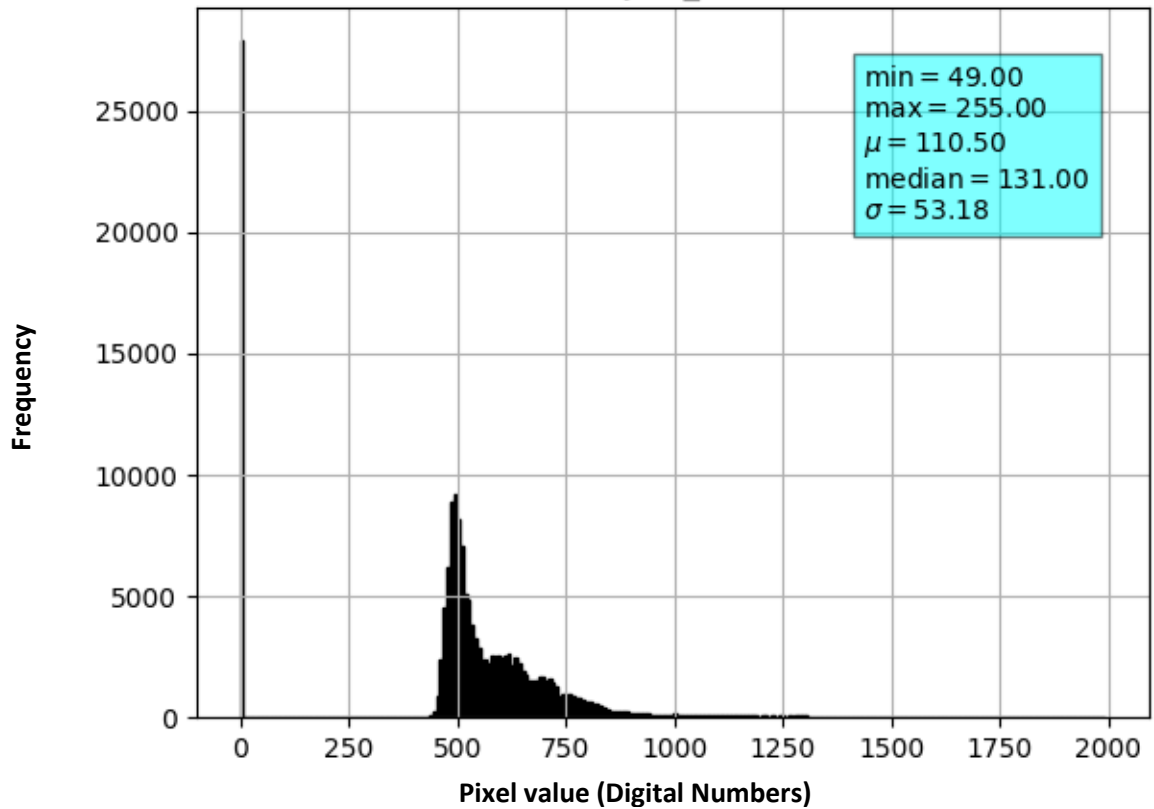
2.5.7.2



Id 03

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 3

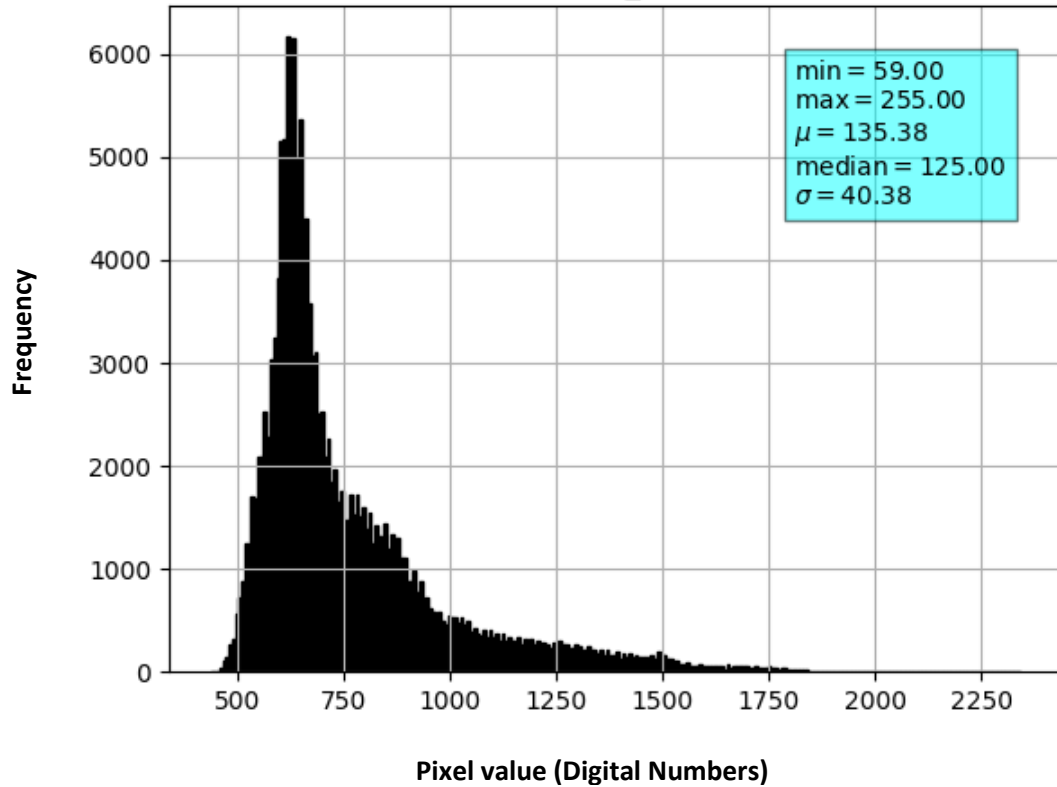
2.5.7.3



Id 04

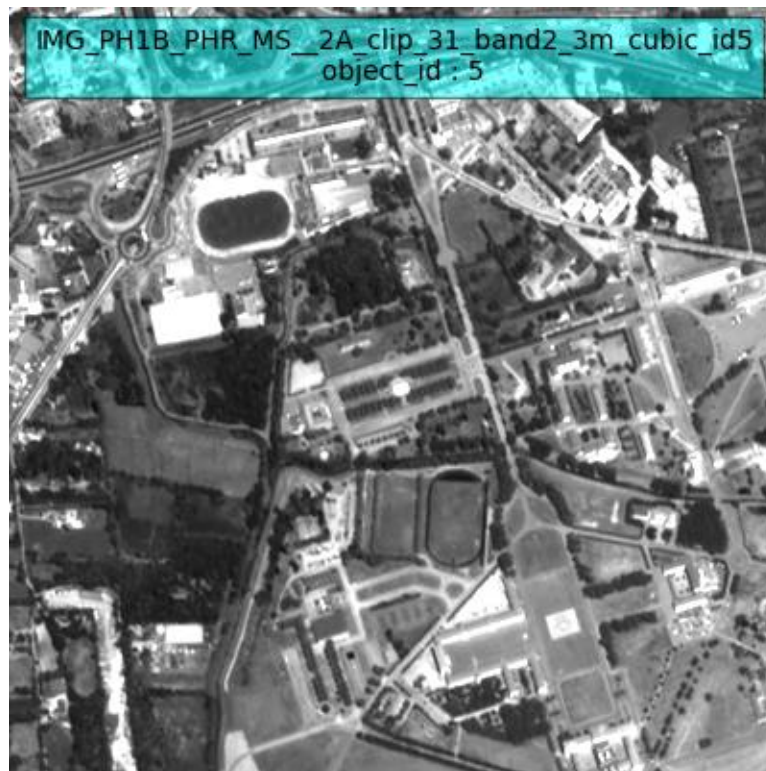
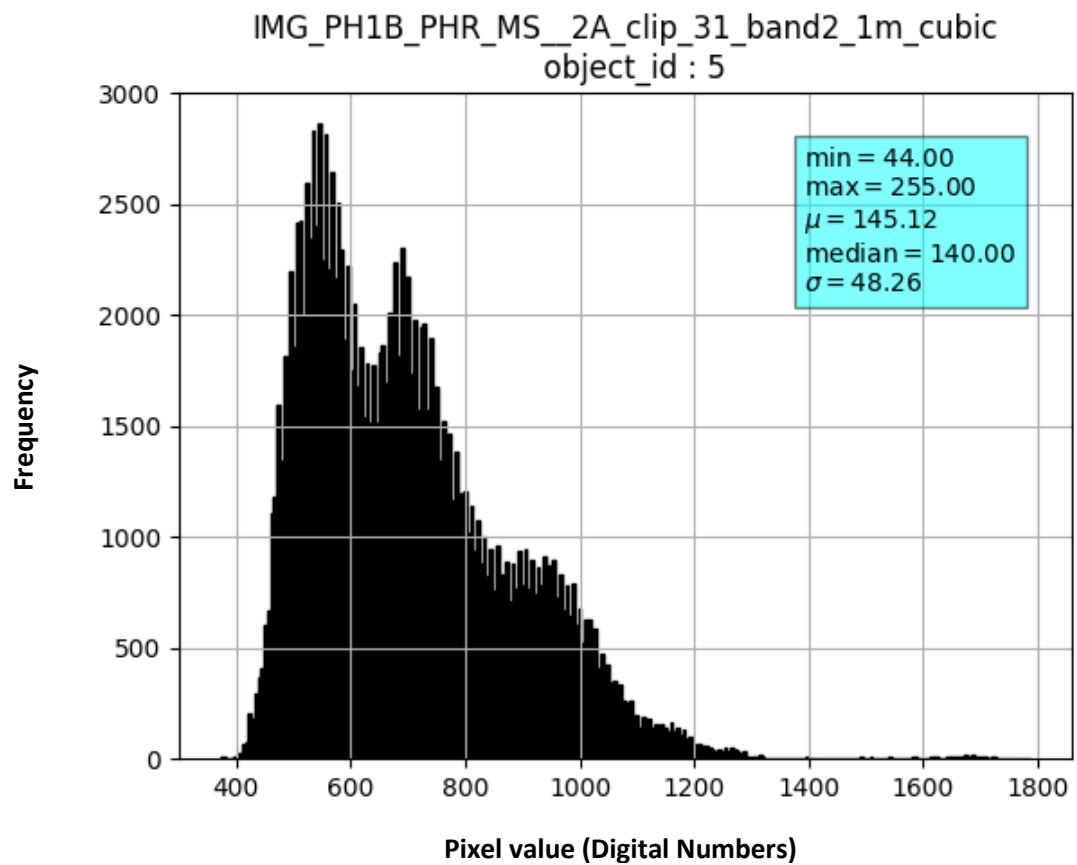
2.5.7.4

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 4



Id 05

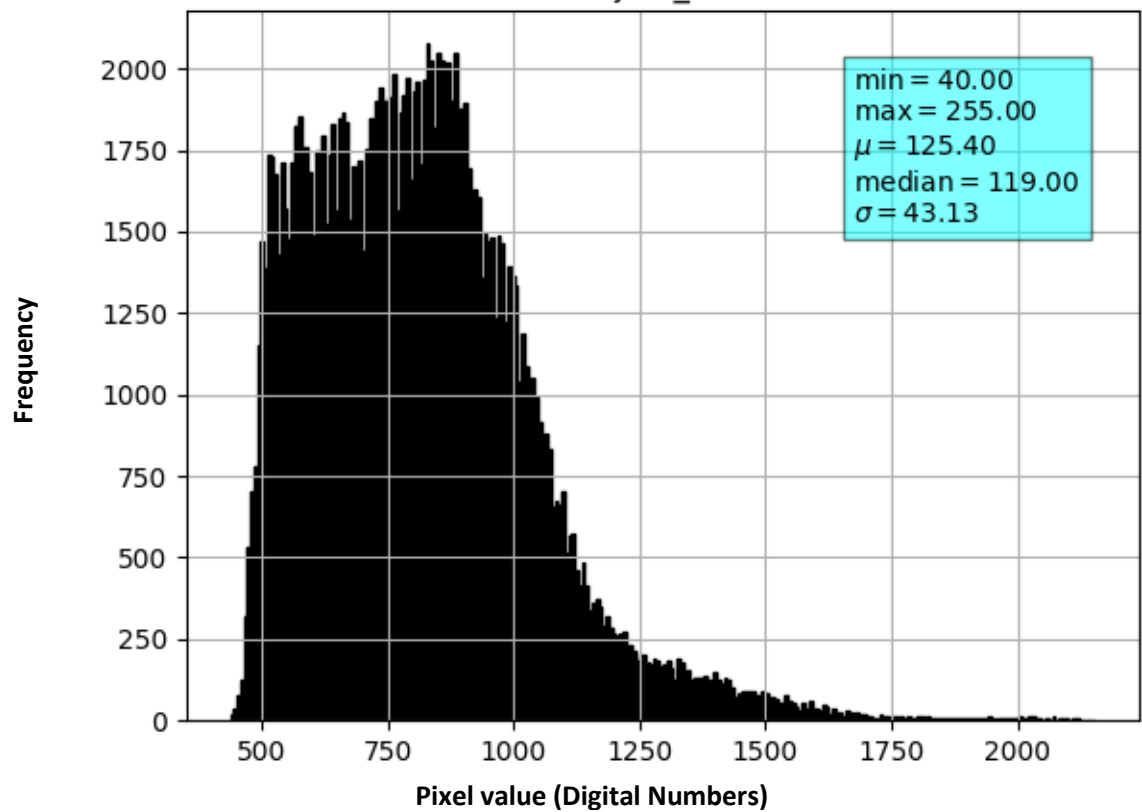
2.5.7.5



Id 06

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 6

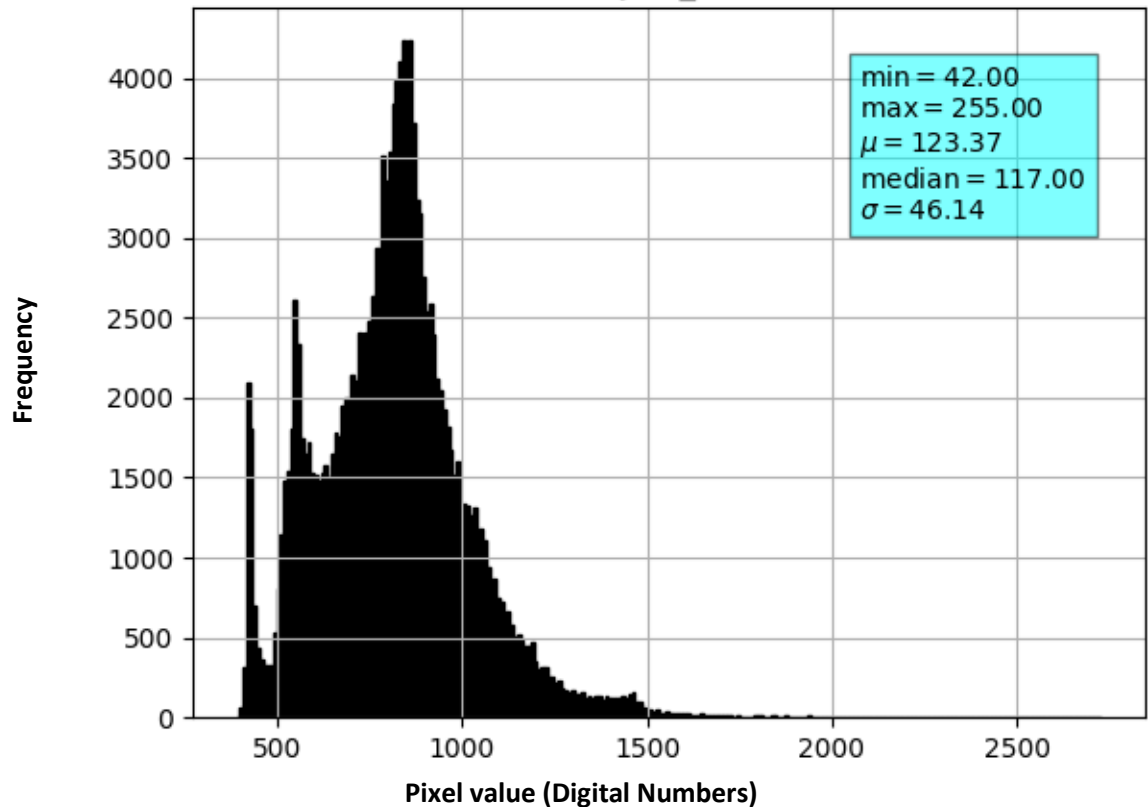
2.5.7.6



Id 07

IMG_PH1B_PHR_MS__2A_clip_31_band2_1m_cubic
object_id : 7

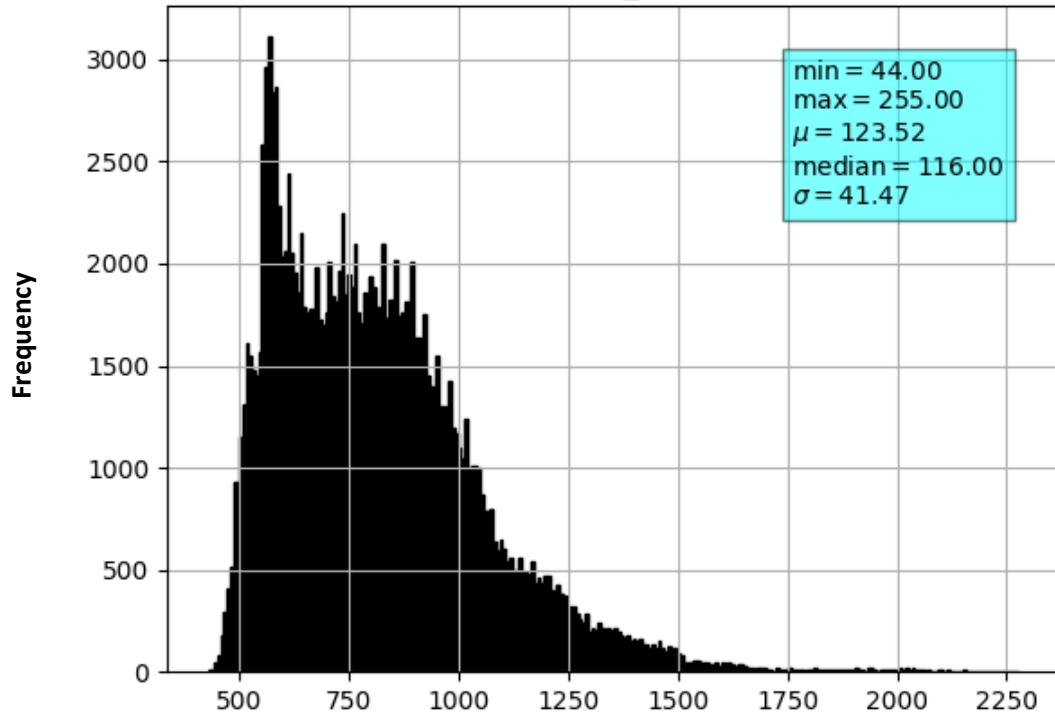
2.5.7.7



Id 08

2.5.7.8

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 8

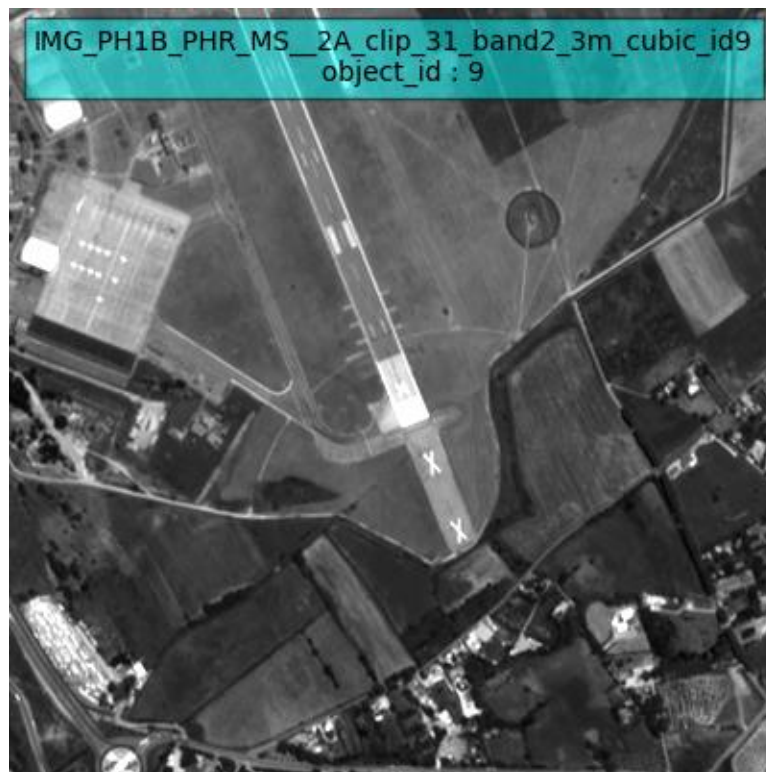
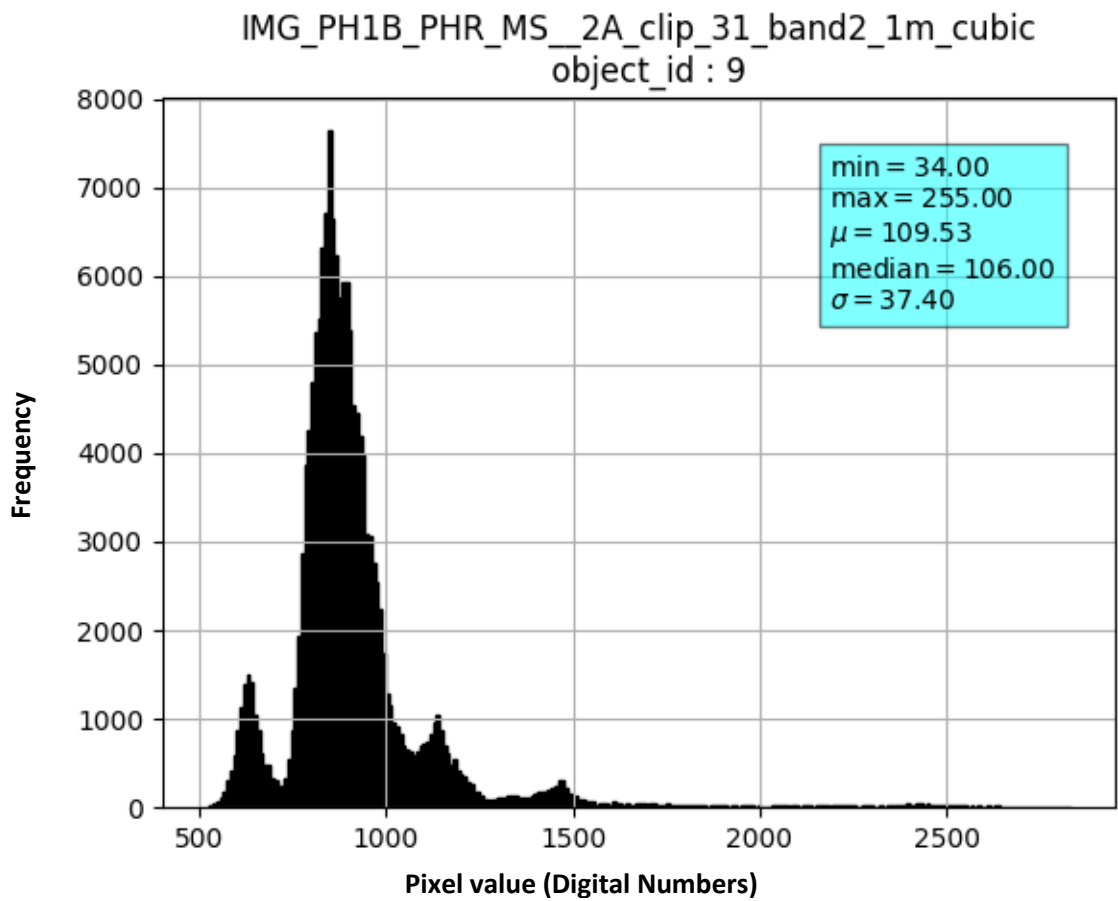


Pixel value (Digital Numbers)



Id 09

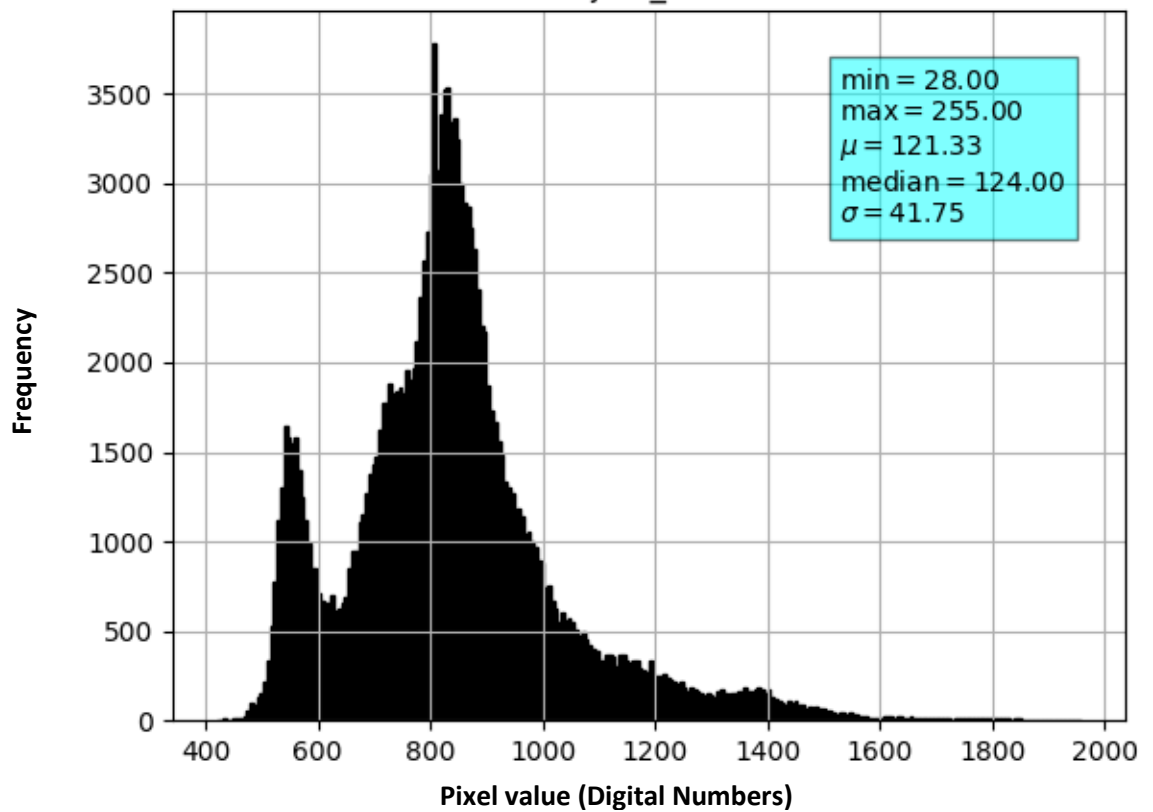
2.5.7.9



Id 10

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 10

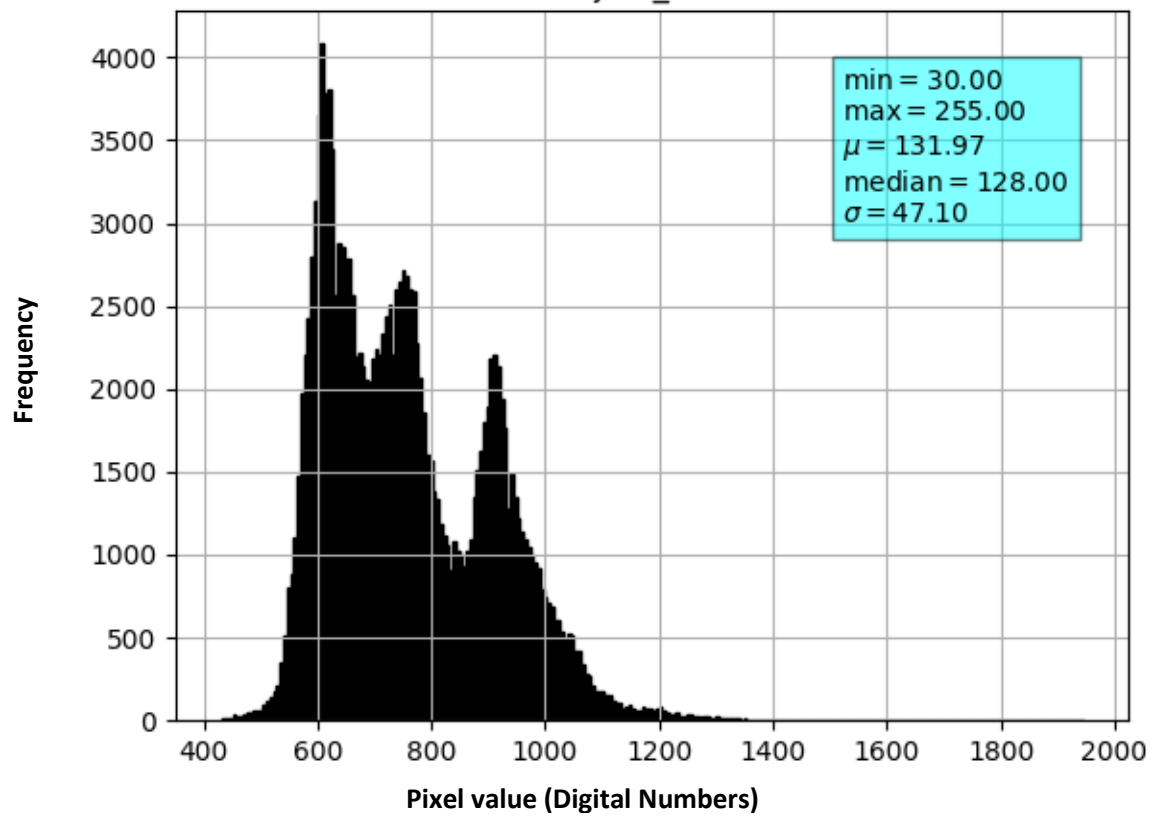
2.5.7.10



Id 11

2.5.7.11

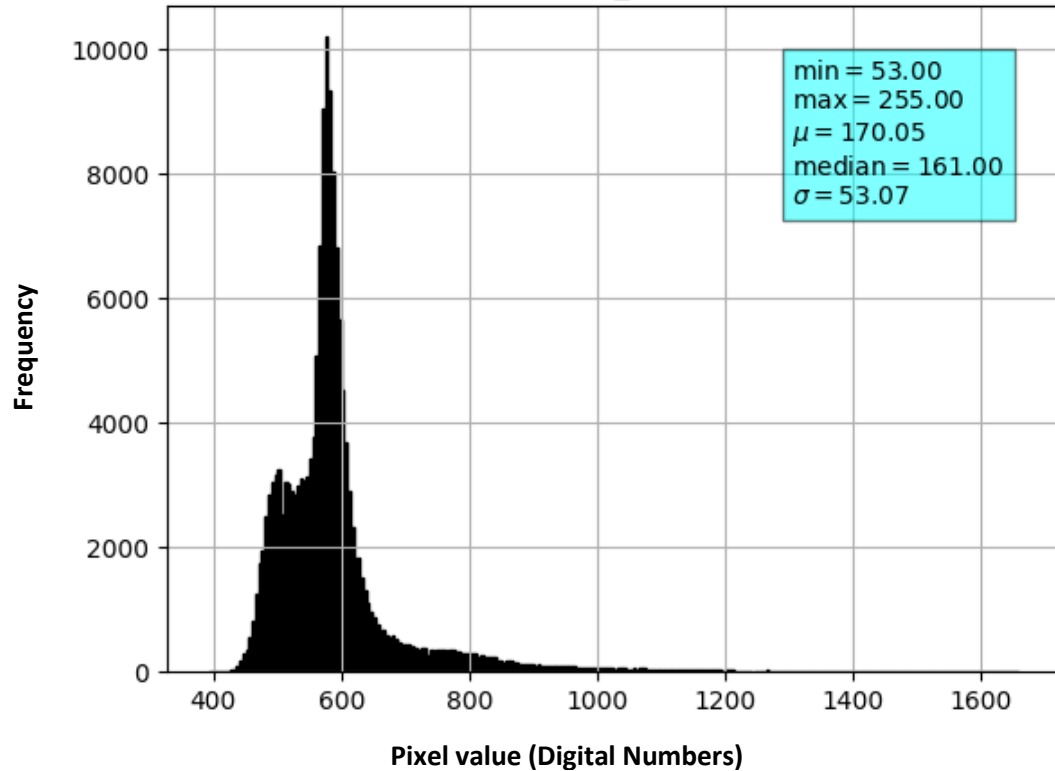
IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 11



Id 12

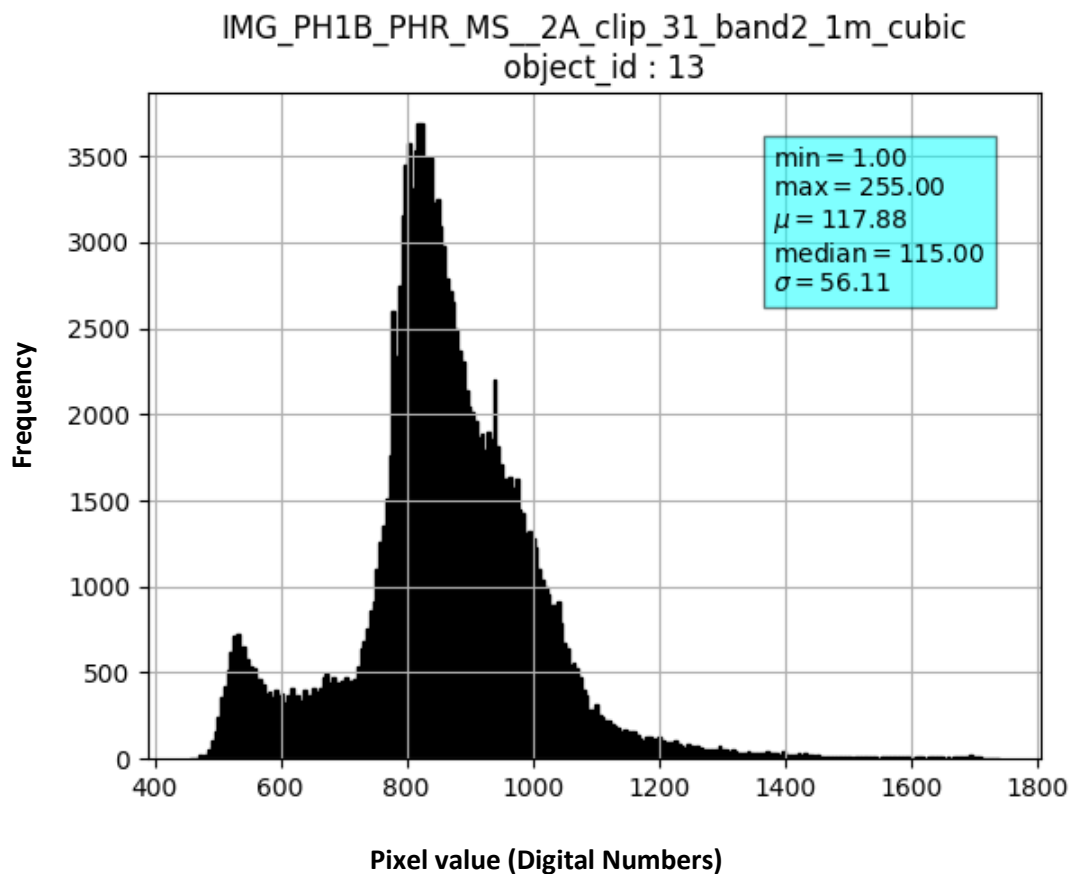
2.5.7.12

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 12



Id 13

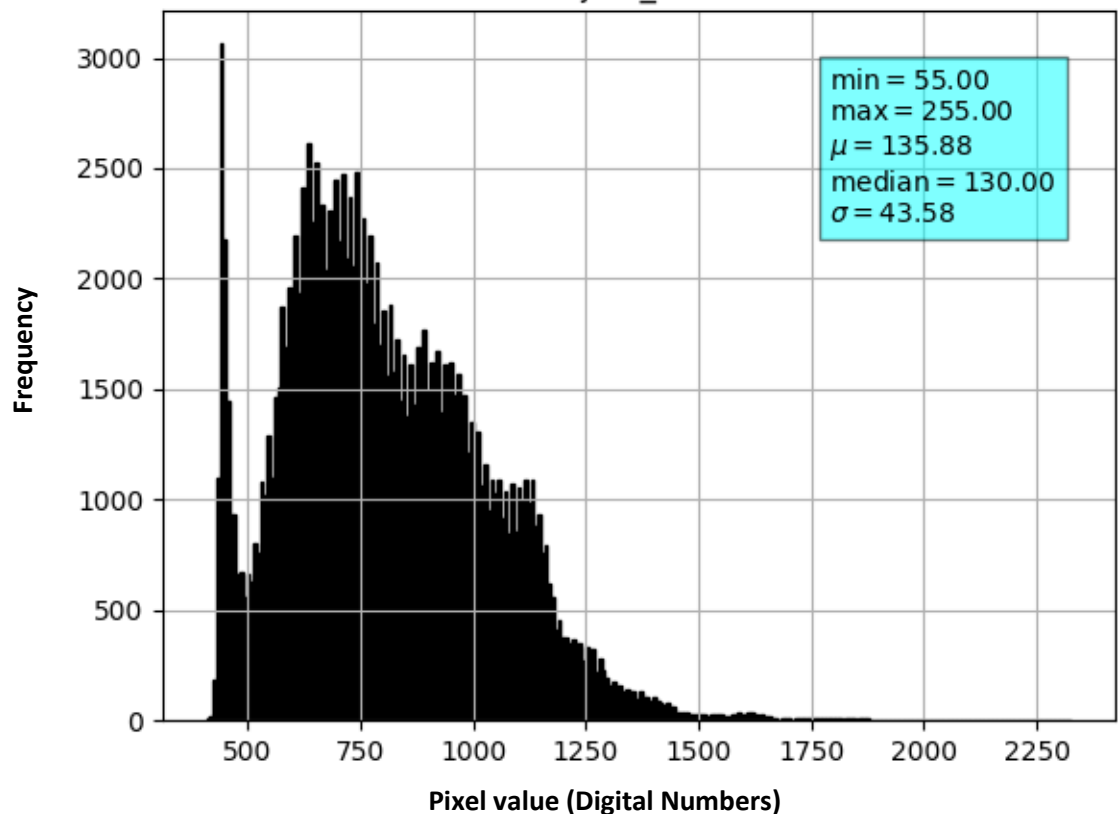
2.5.7.13



Id 14

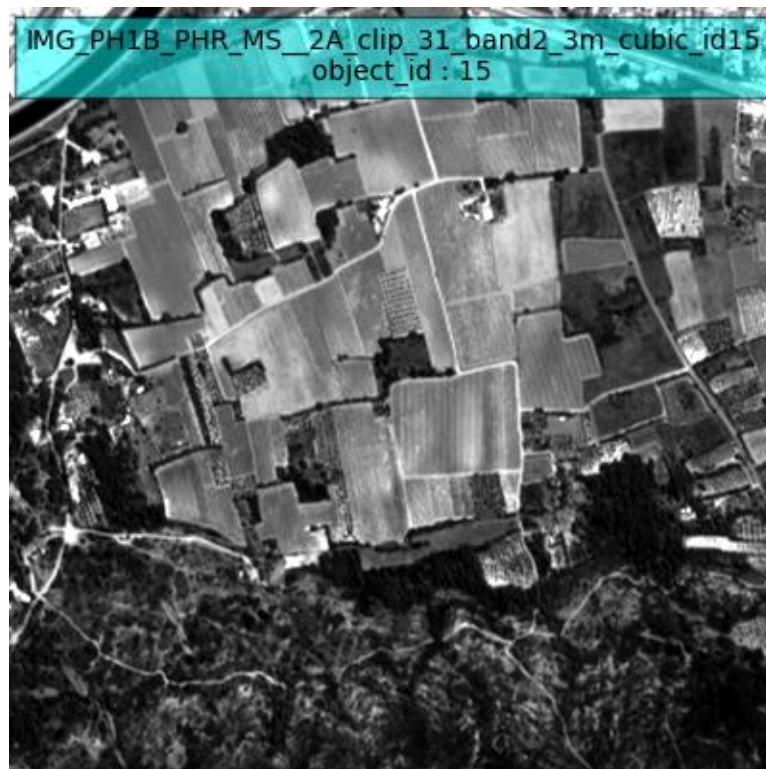
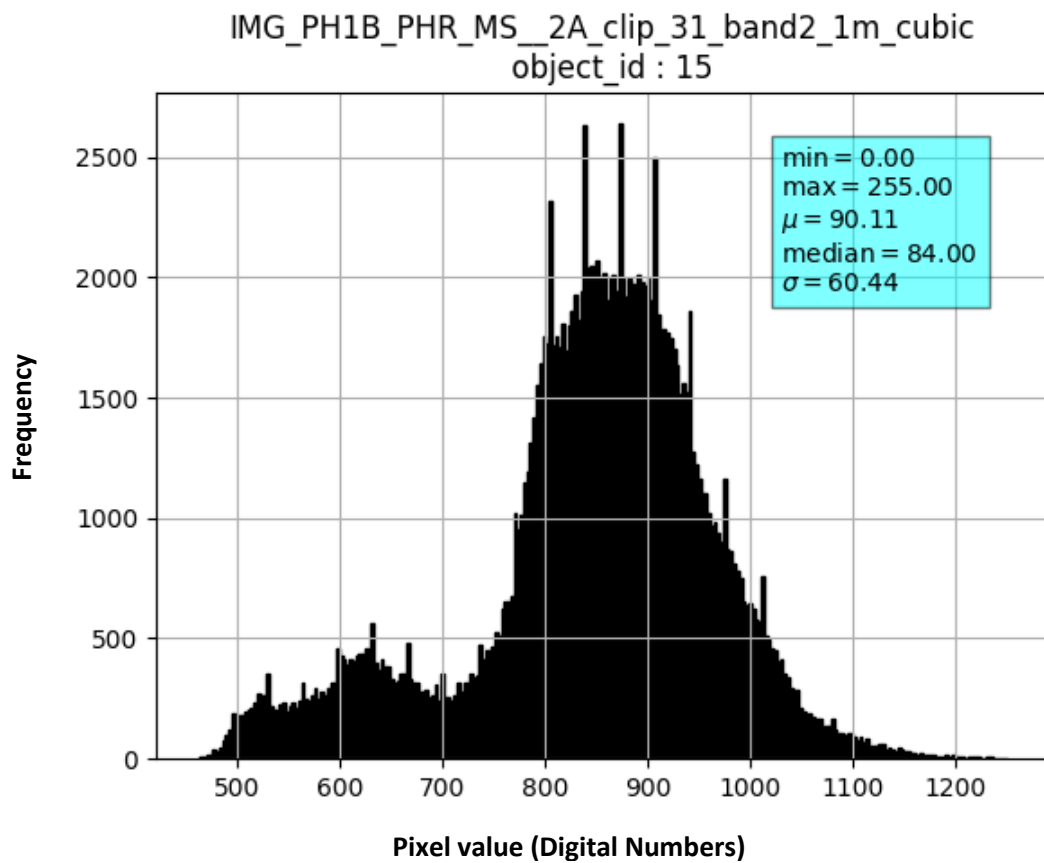
IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 14

2.5.7.14



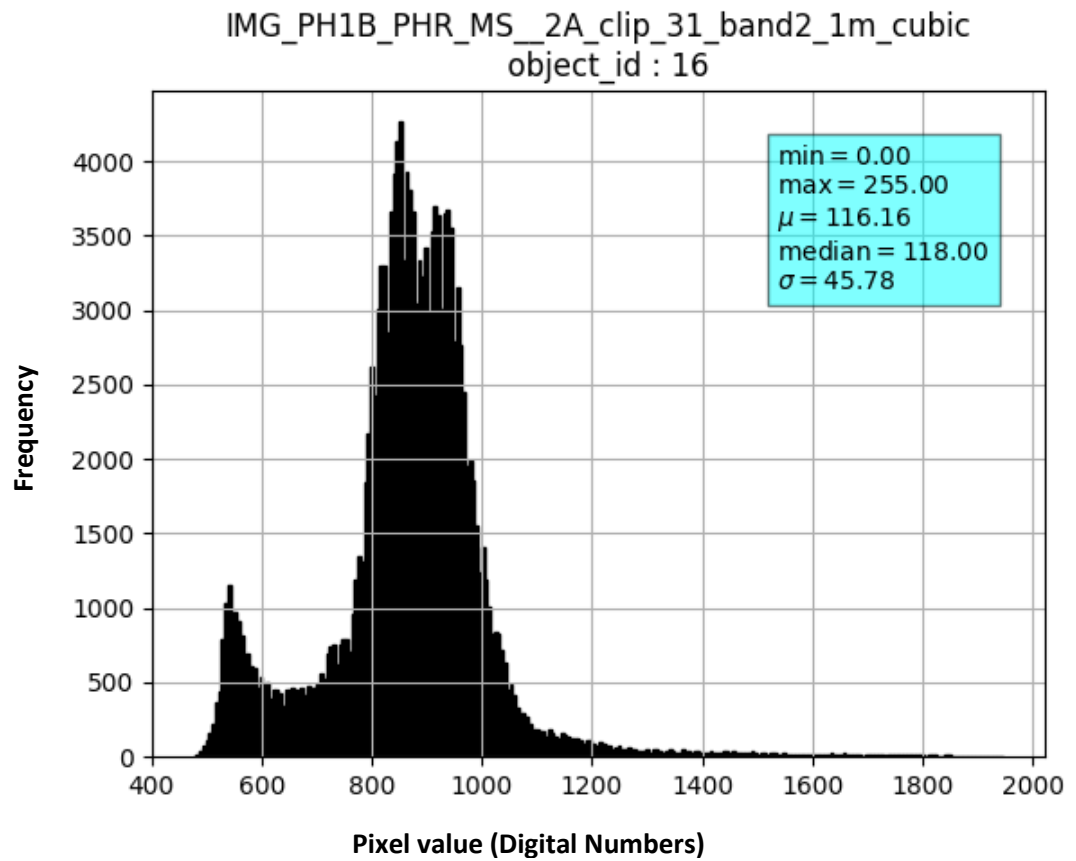
Id 15

2.5.7.15



Id 16

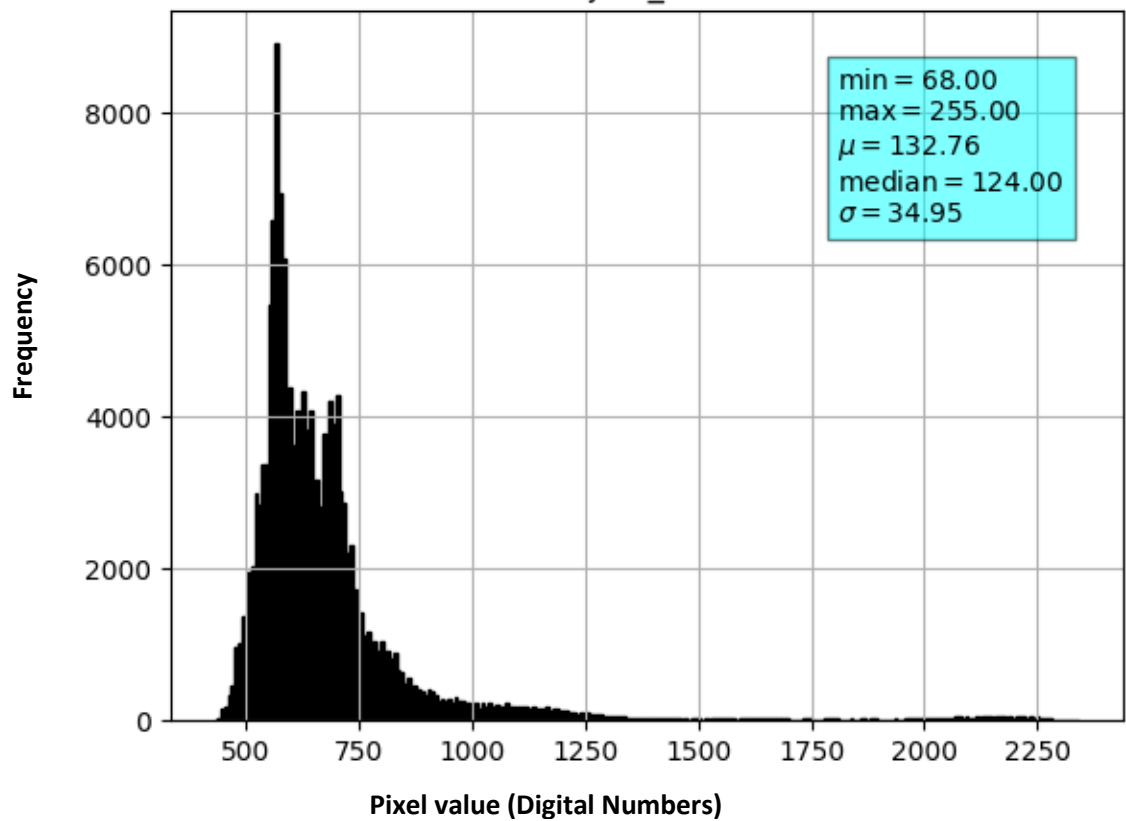
2.5.7.16



Id 17

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 17

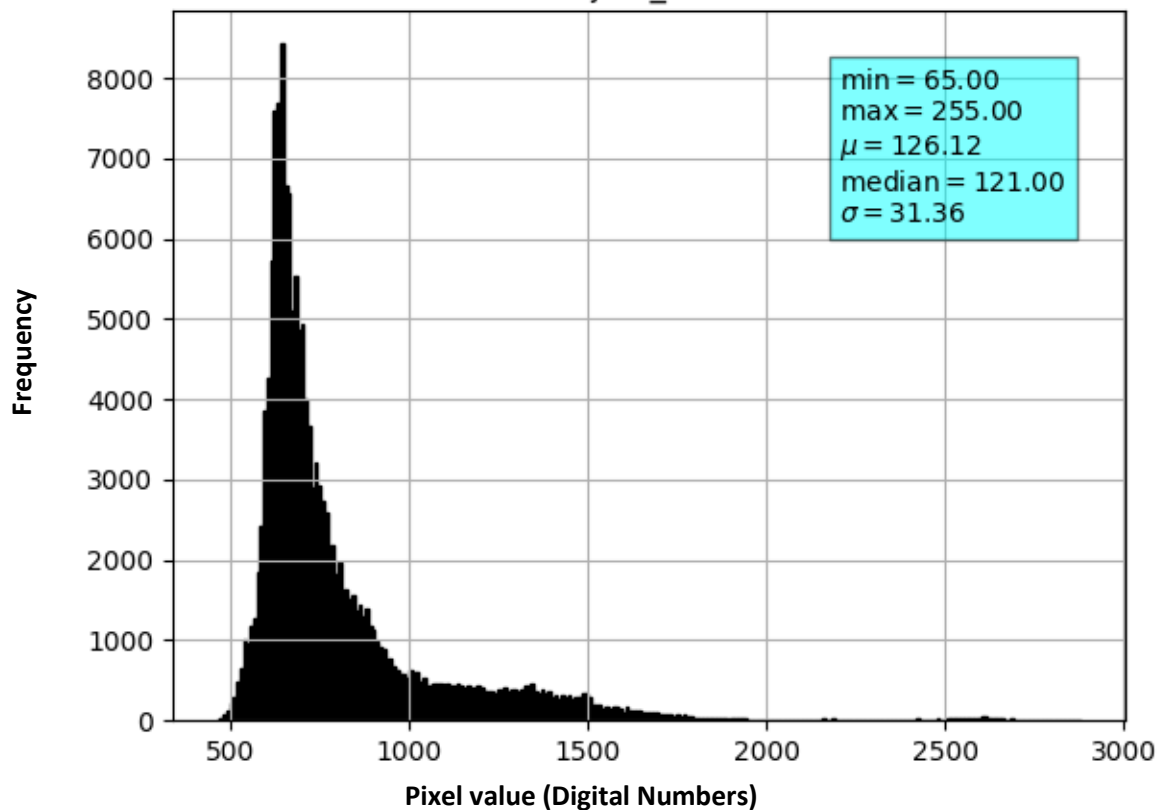
2.5.7.17



Id 18

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 18

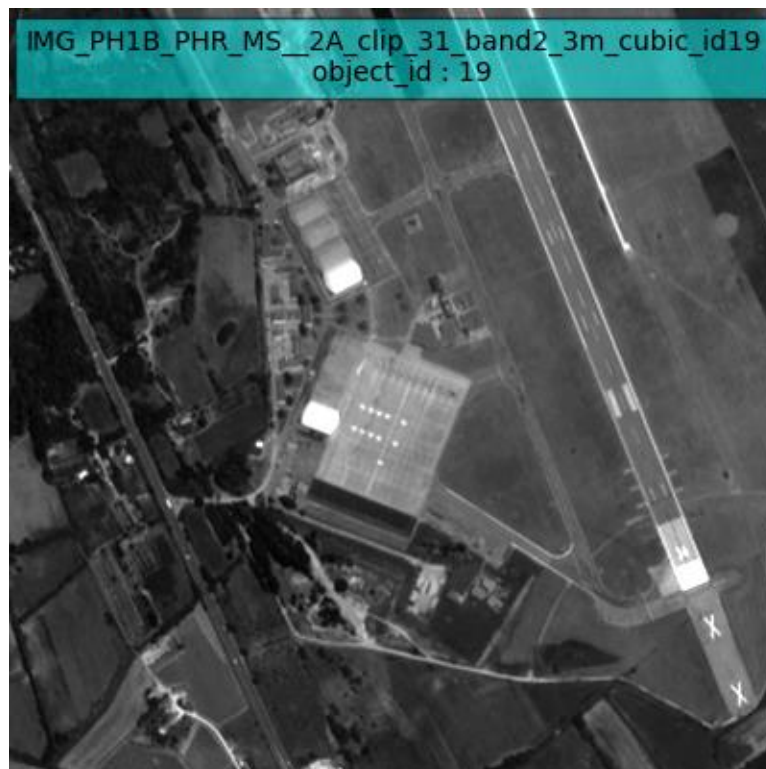
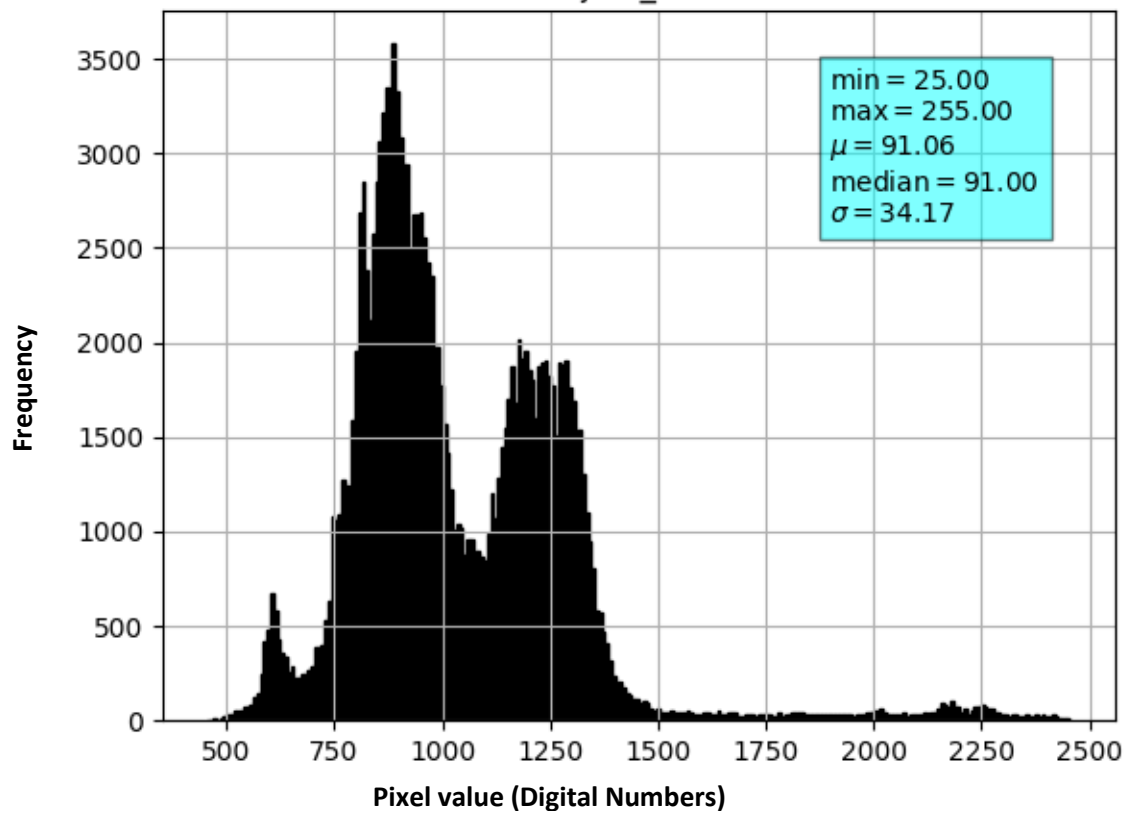
2.5.7.18



Id 19

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 19

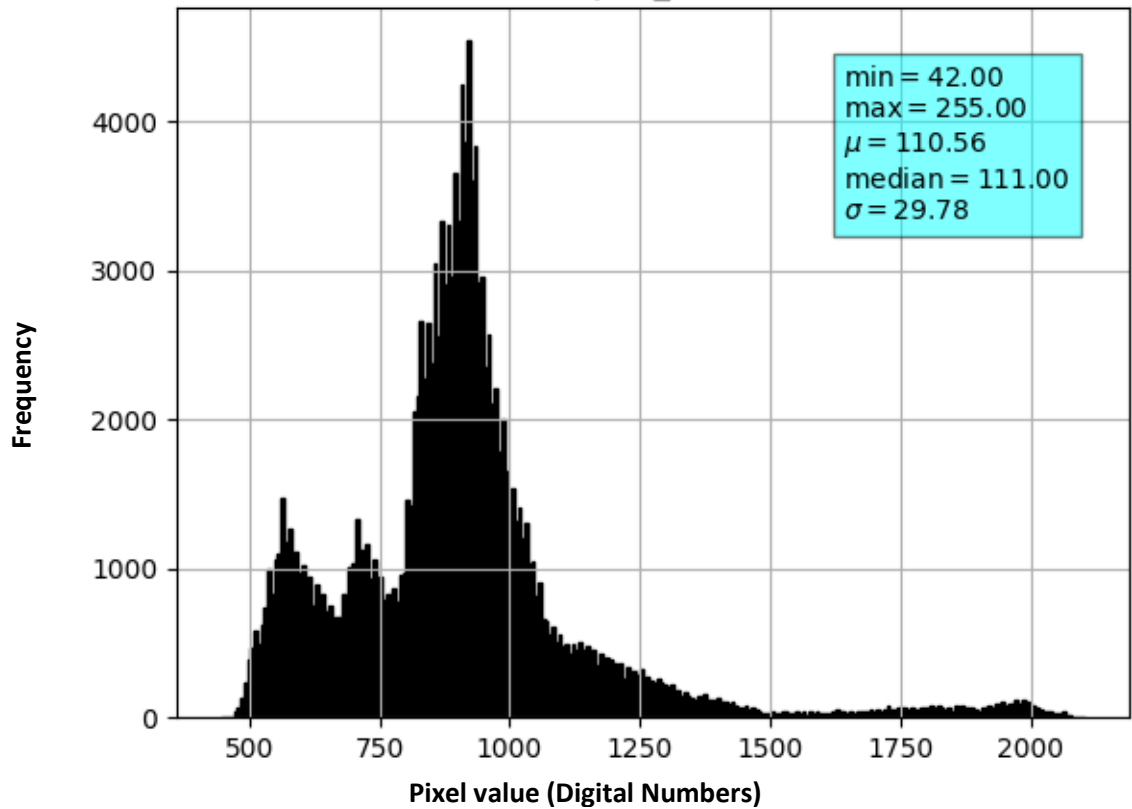
2.5.7.19



Id 20

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 20

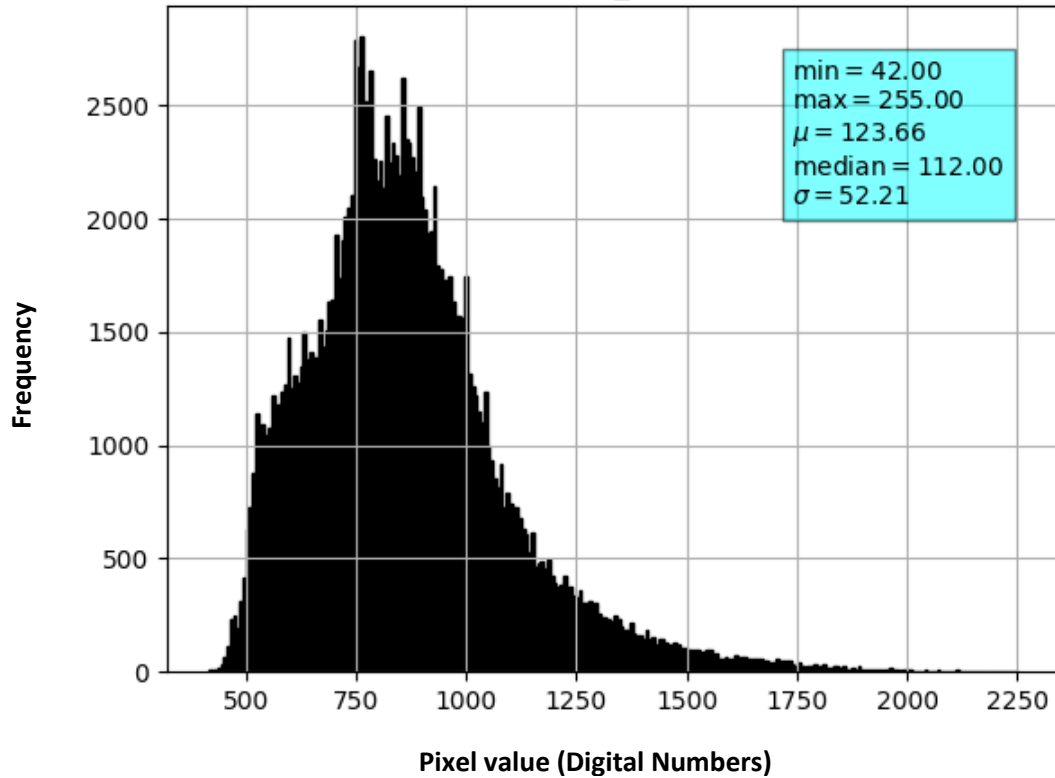
2.5.7.20



Id 21

2.5.7.21

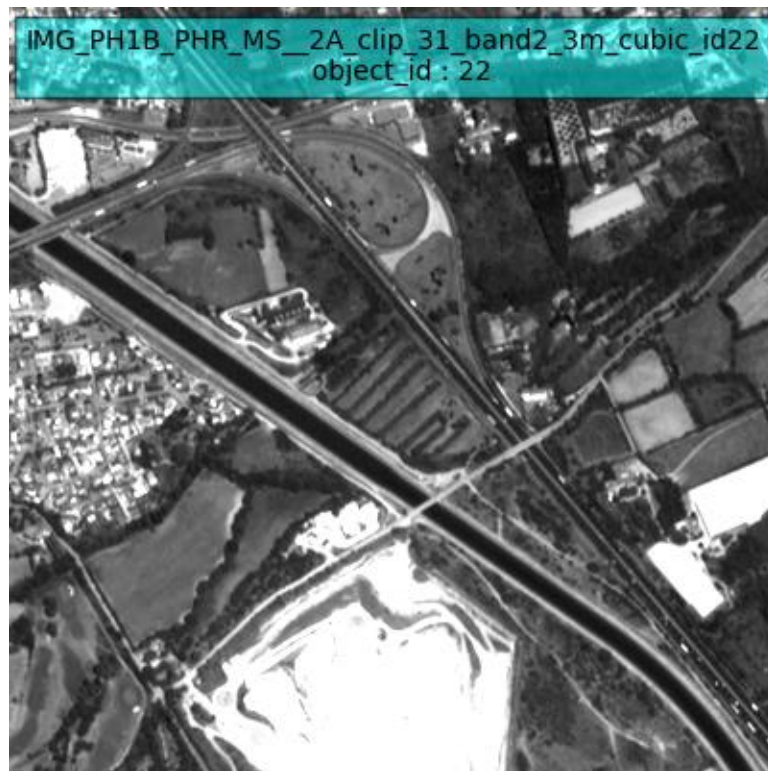
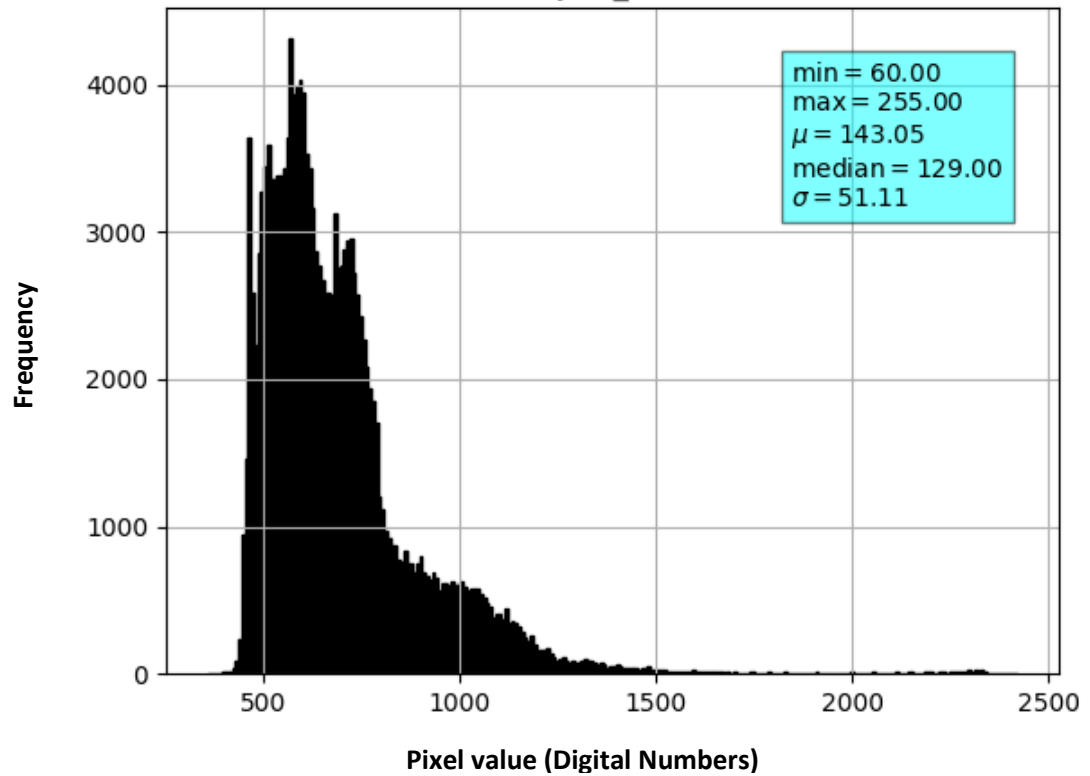
IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 21



Id 22

2.5.7.22

IMG_PH1B_PHR_MS_2A_clip_31_band2_1m_cubic
object_id : 22

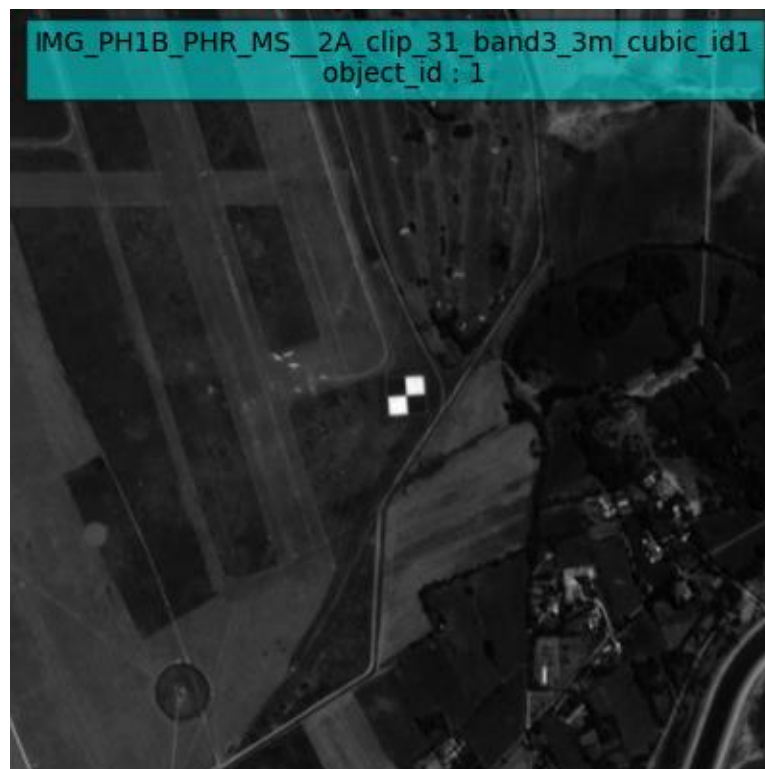
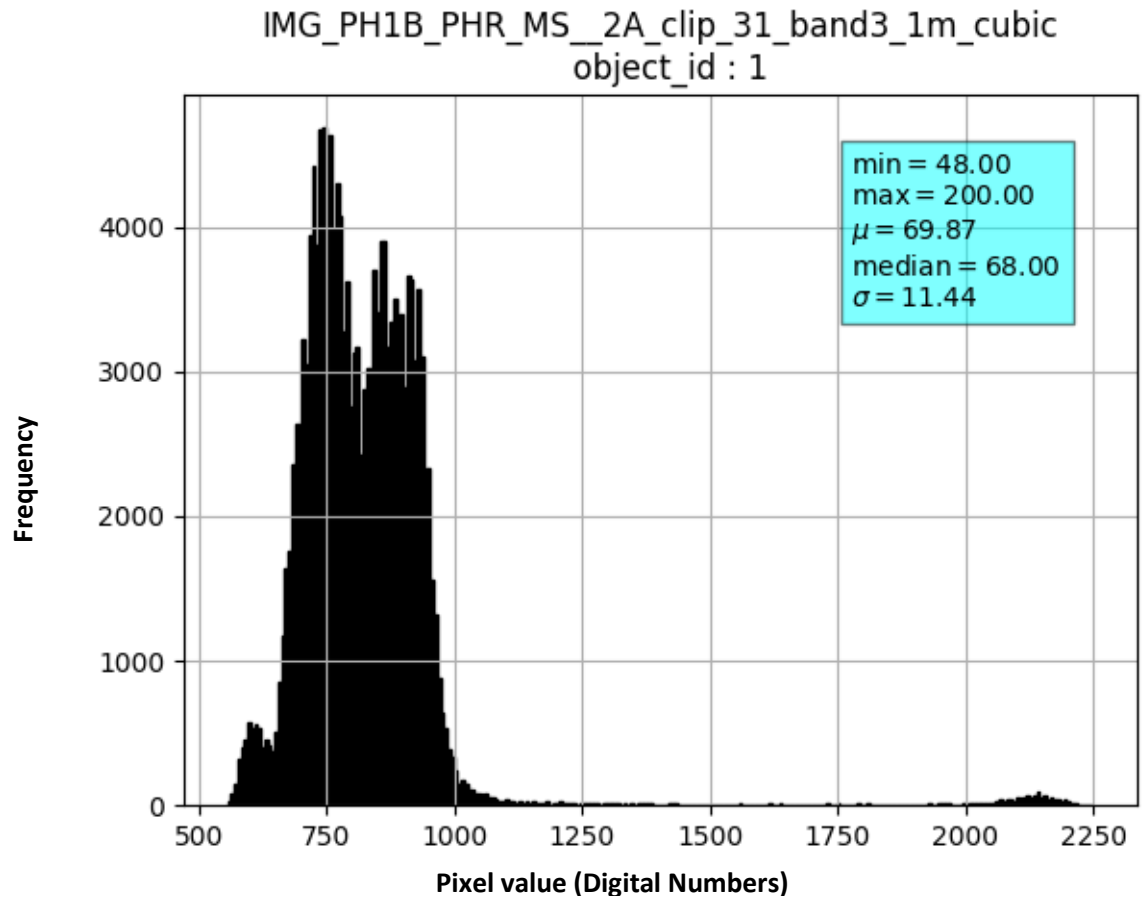


PHR – Red Band

Id 01

2.5.8

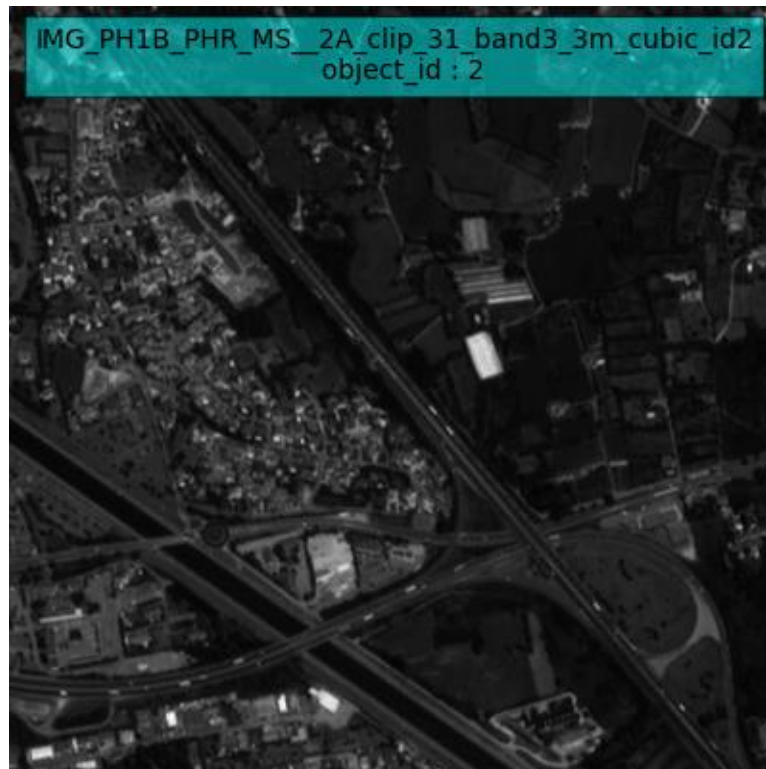
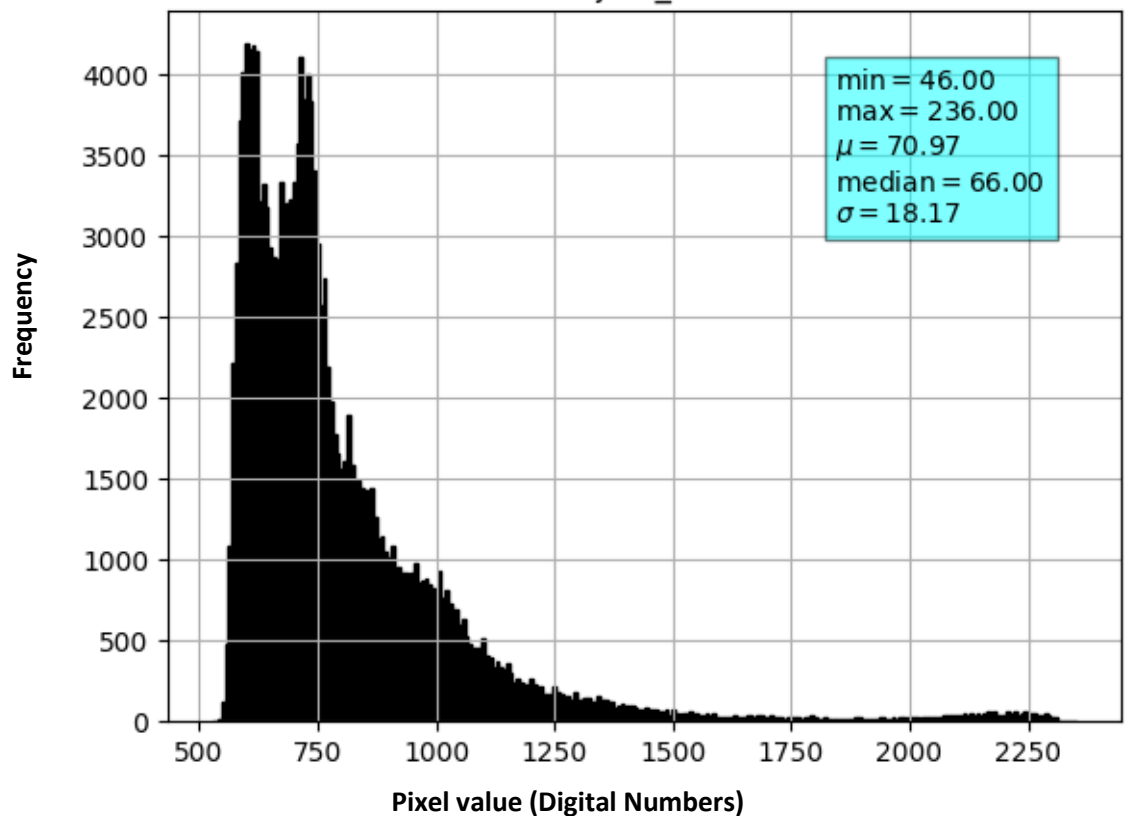
2.5.8.1



Id 02

2.5.8.2

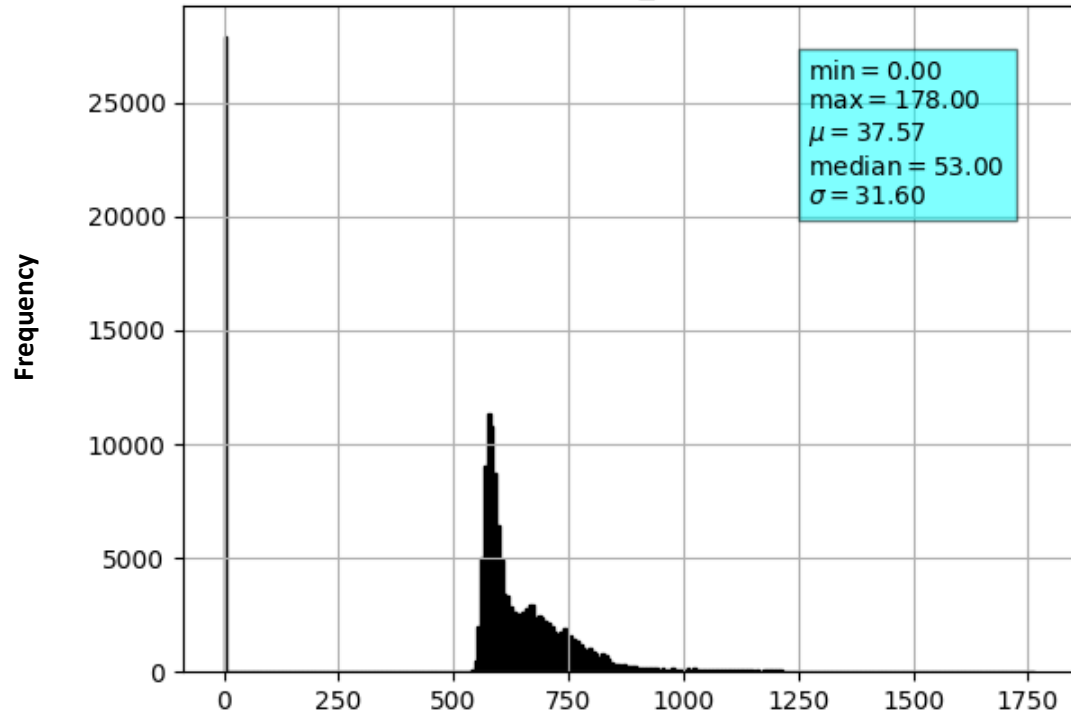
IMG_PH1B_PHR_MS_2A_clip_31_band3_1m_cubic
object_id : 2



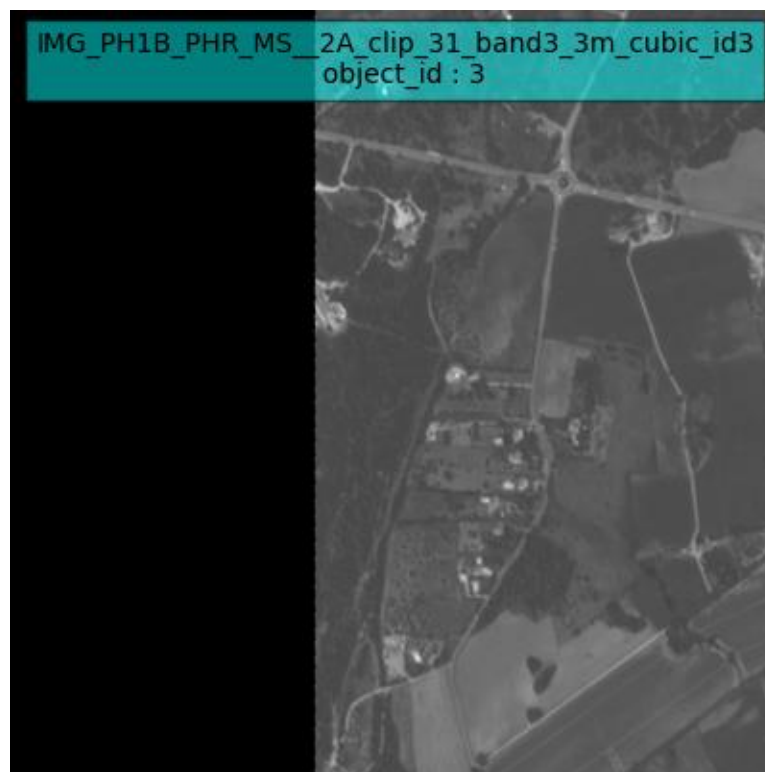
Id 03

2.5.8.3

IMG_PH1B_PHR_MS_2A_clip_31_band3_1m_cubic
object_id : 3

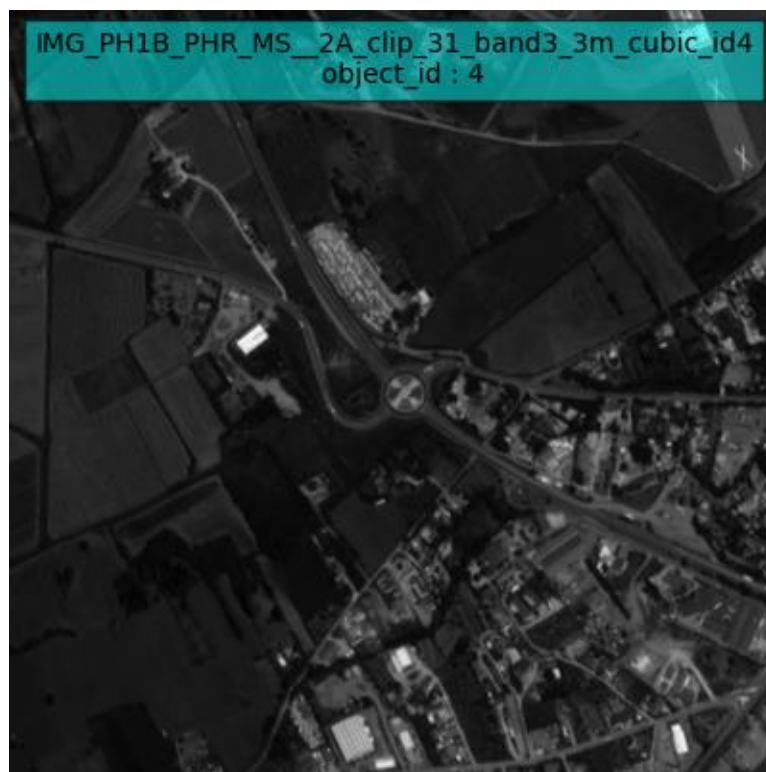
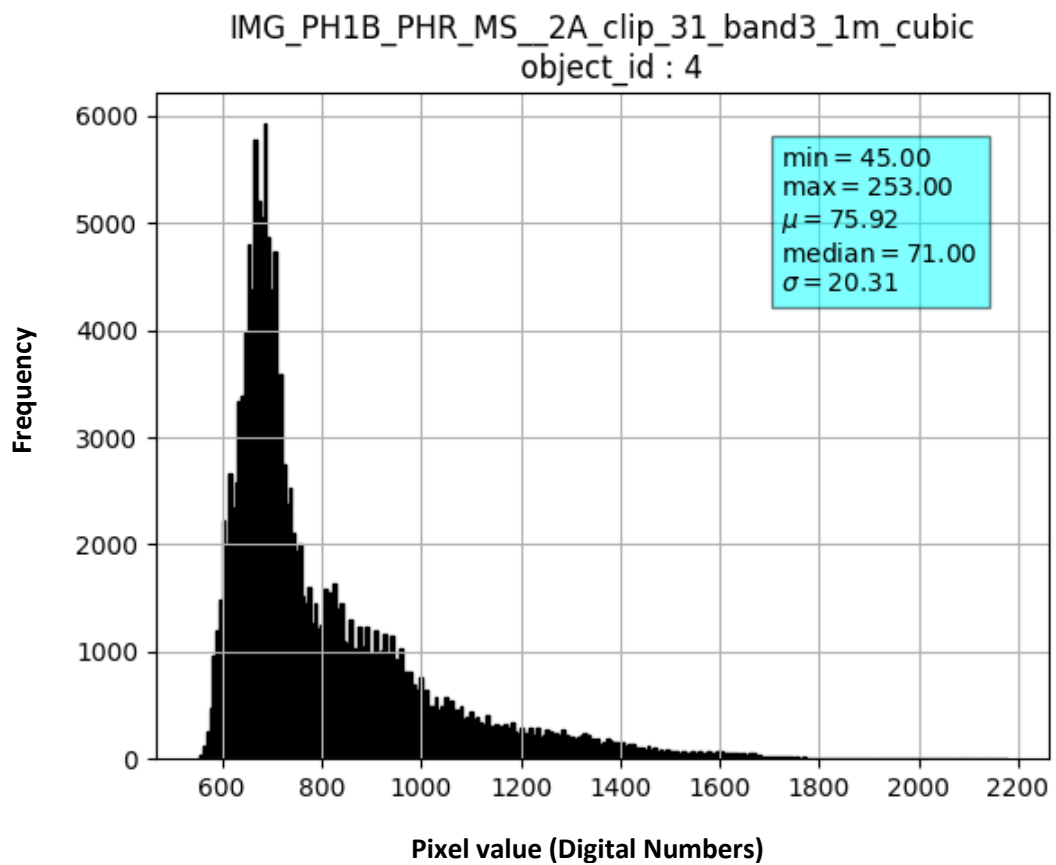


Pixel value (Digital Numbers)



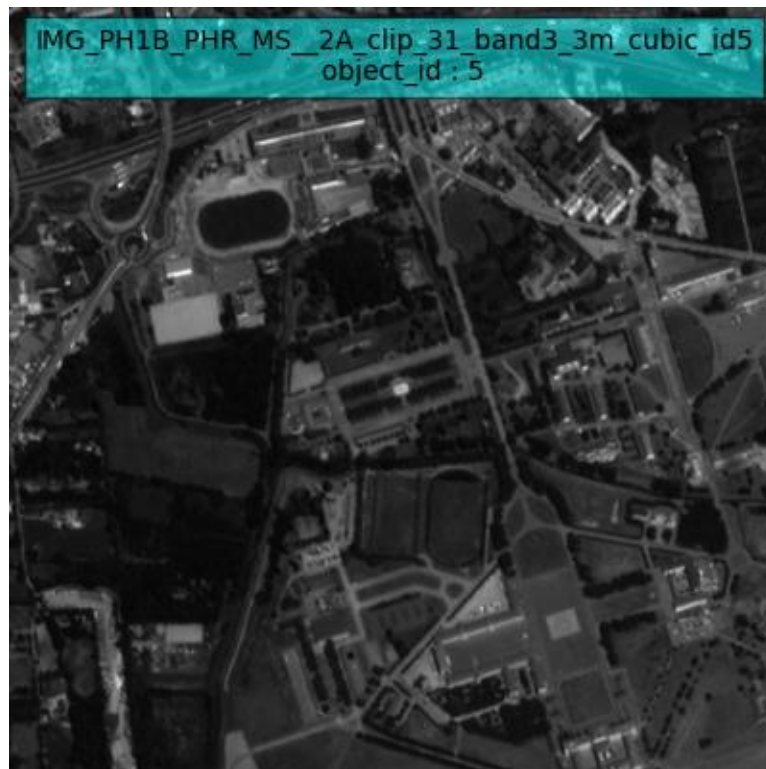
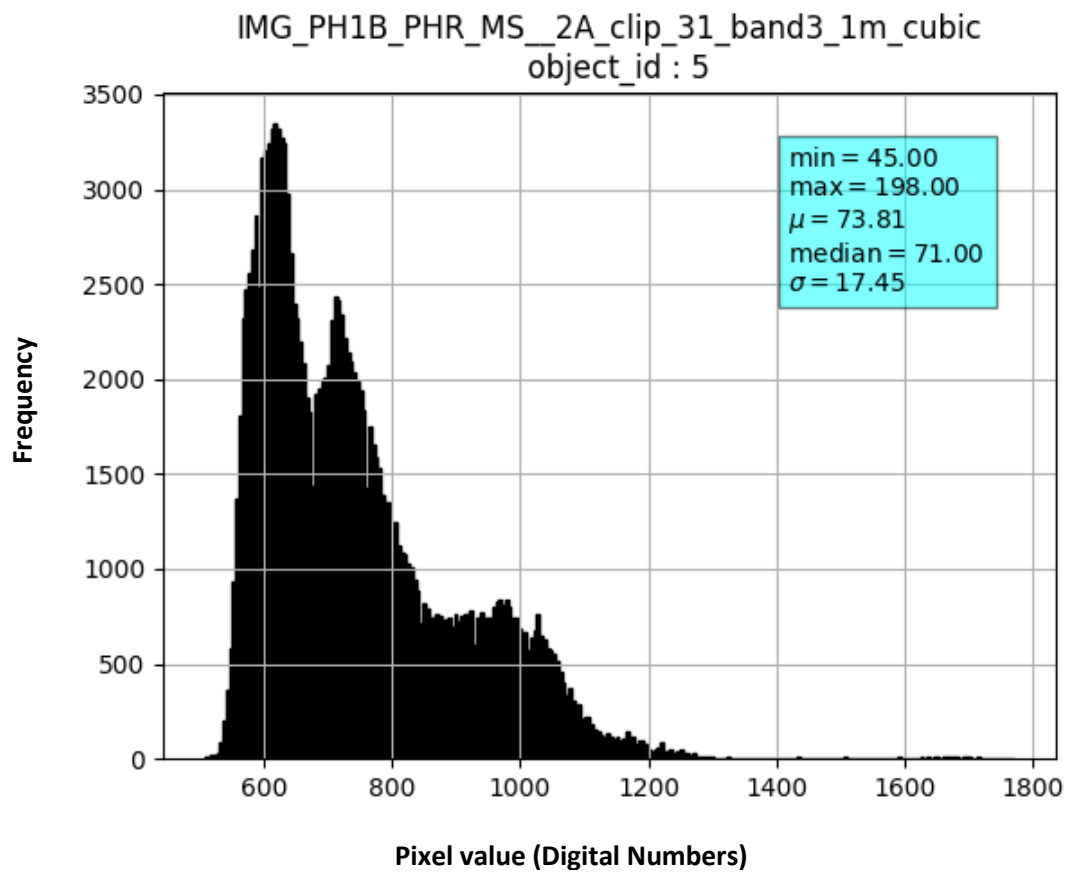
Id 04

2.5.8.4



Id 05

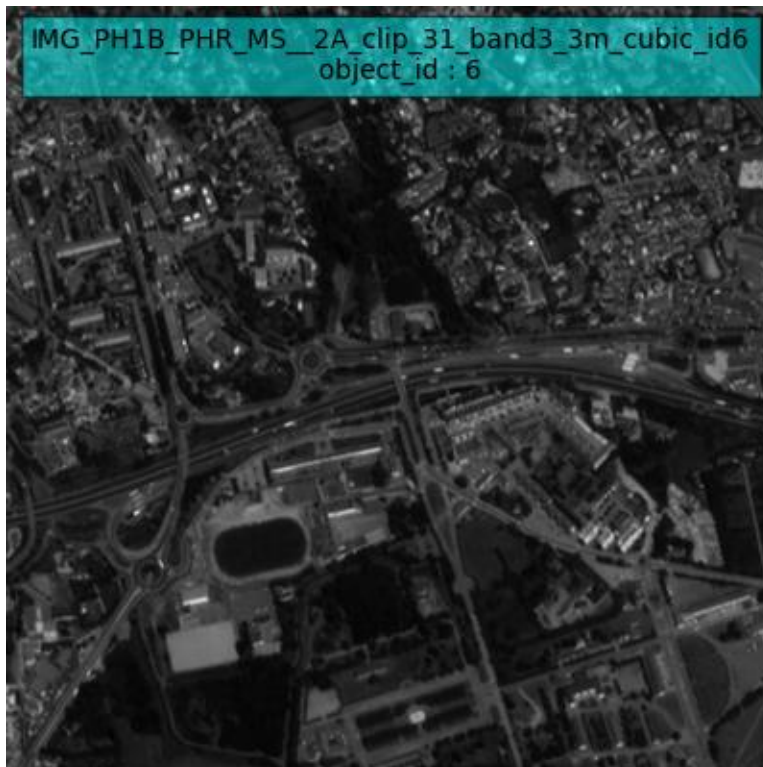
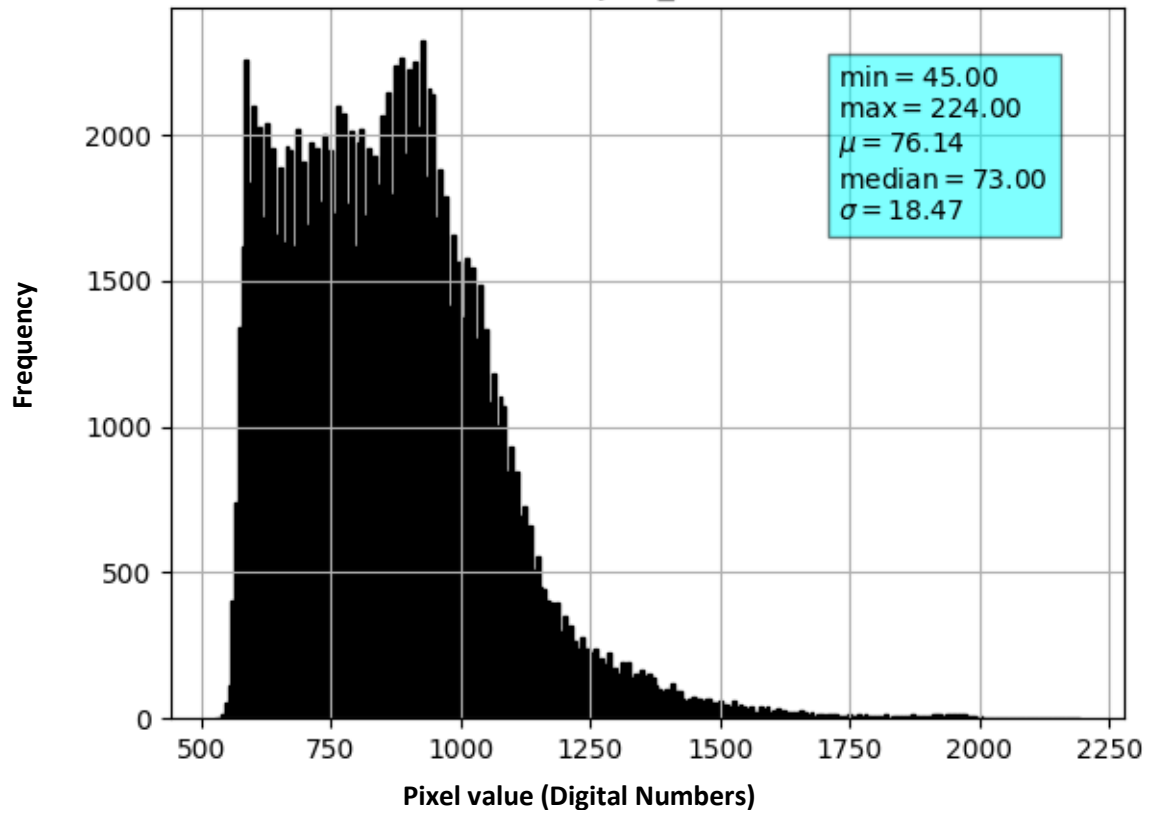
2.5.8.5



Id 06

IMG_PH1B_PHR_MS_2A_clip_31_band3_1m_cubic
object_id : 6

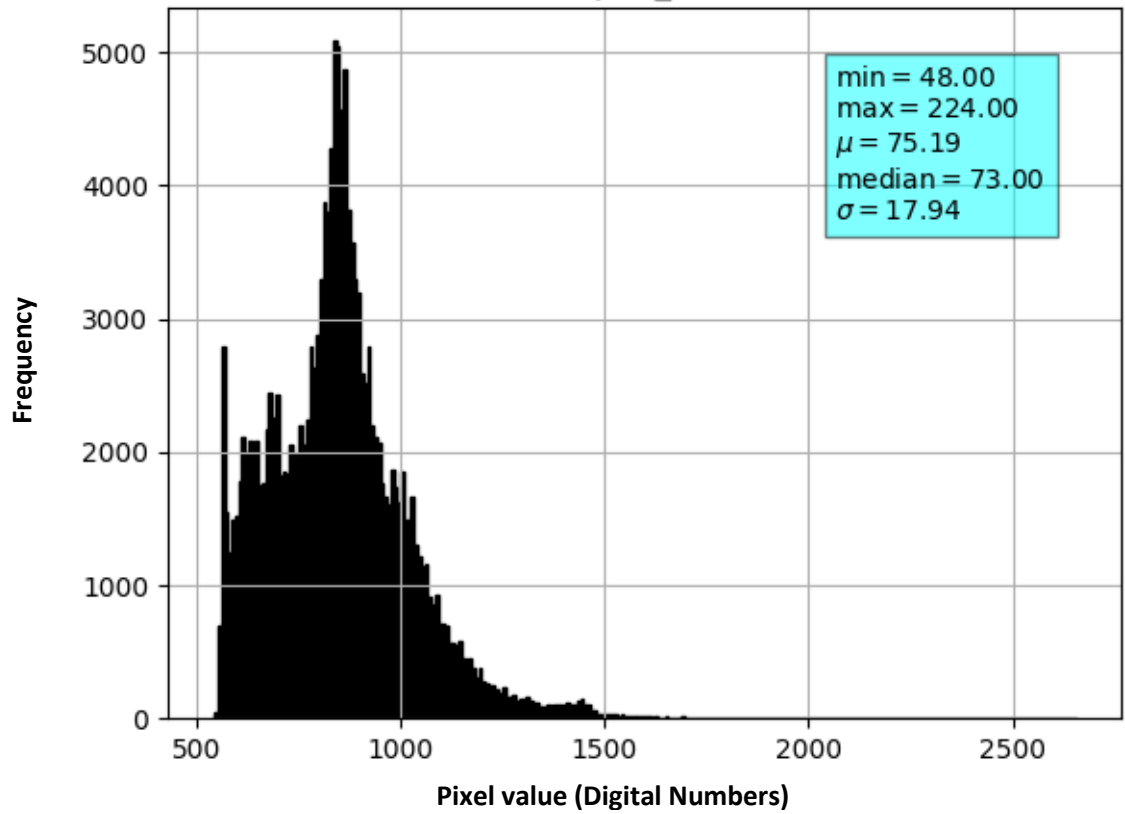
2.5.8.6



Id 07

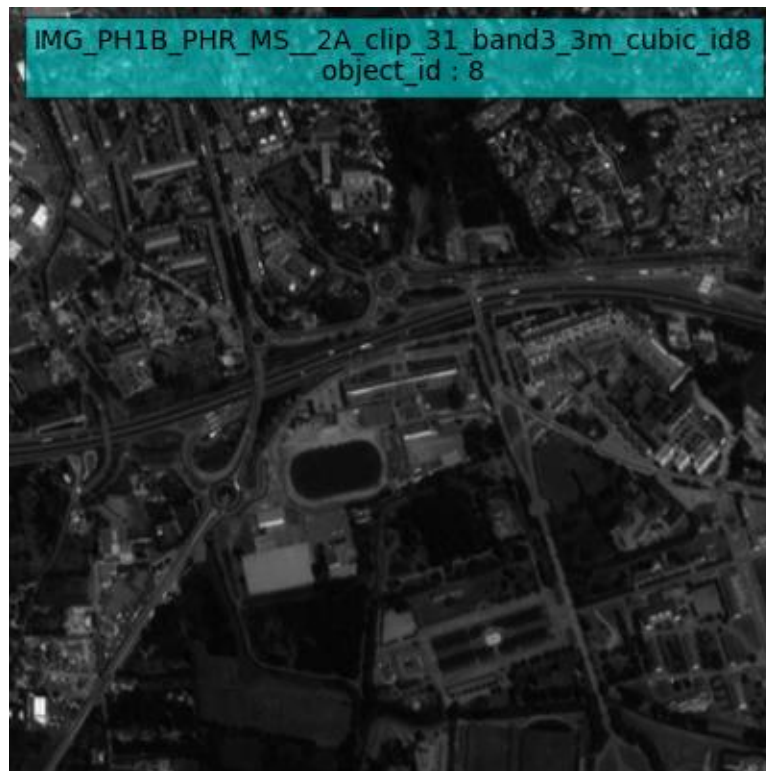
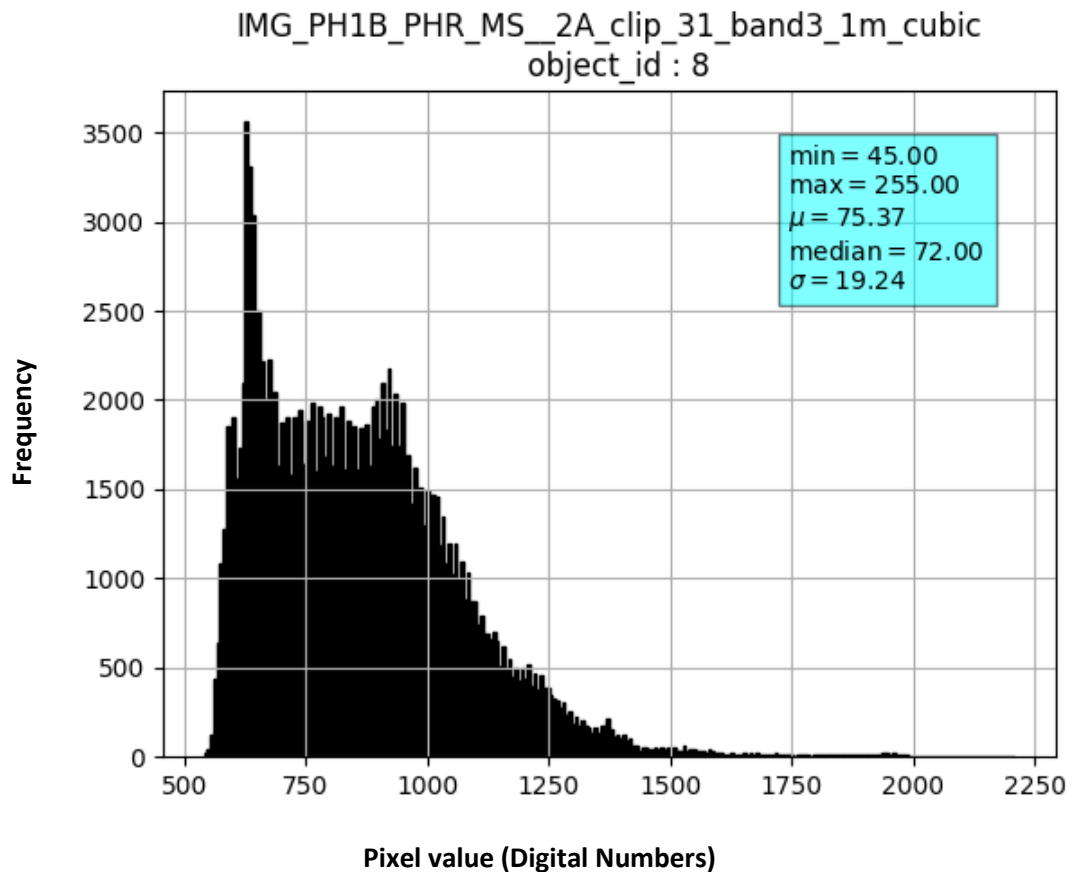
2.5.8.7

IMG_PH1B_PHR_MS_2A_clip_31_band3_1m_cubic
object_id : 7



Id 08

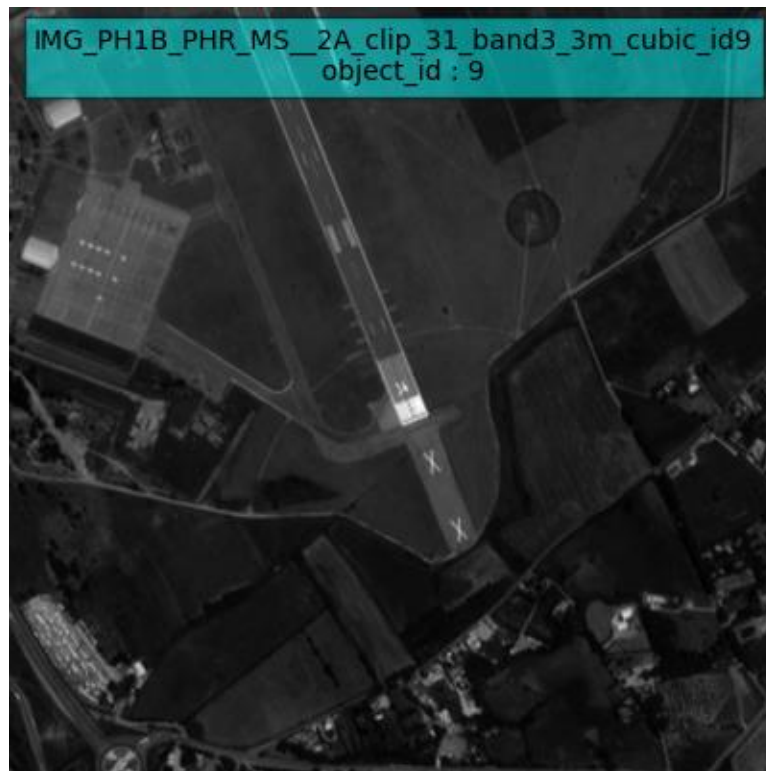
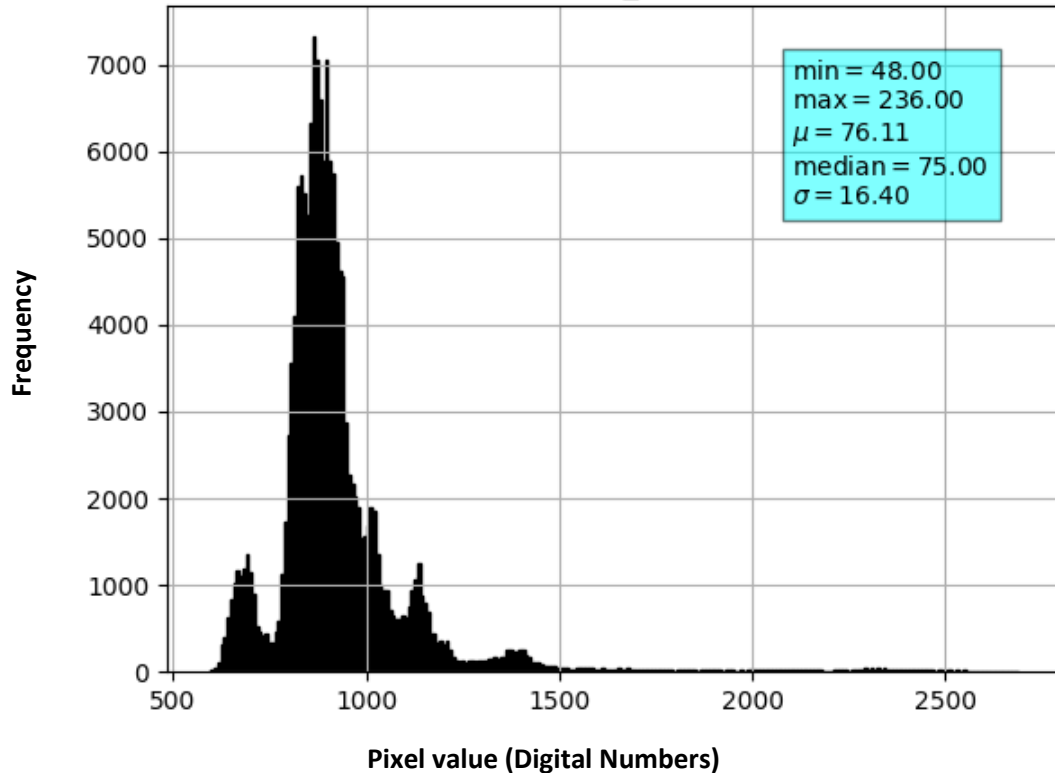
2.5.8.8



Id 09

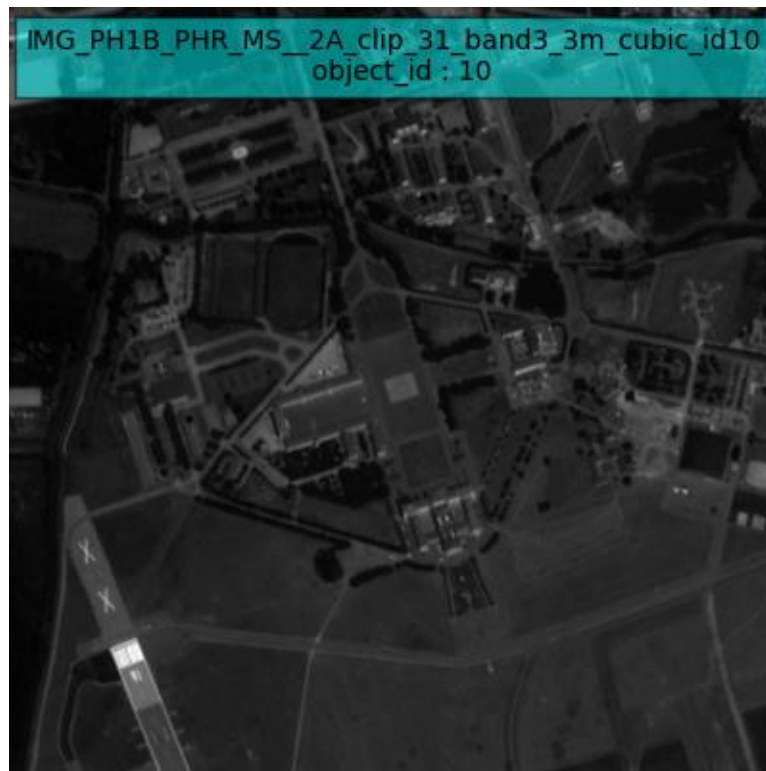
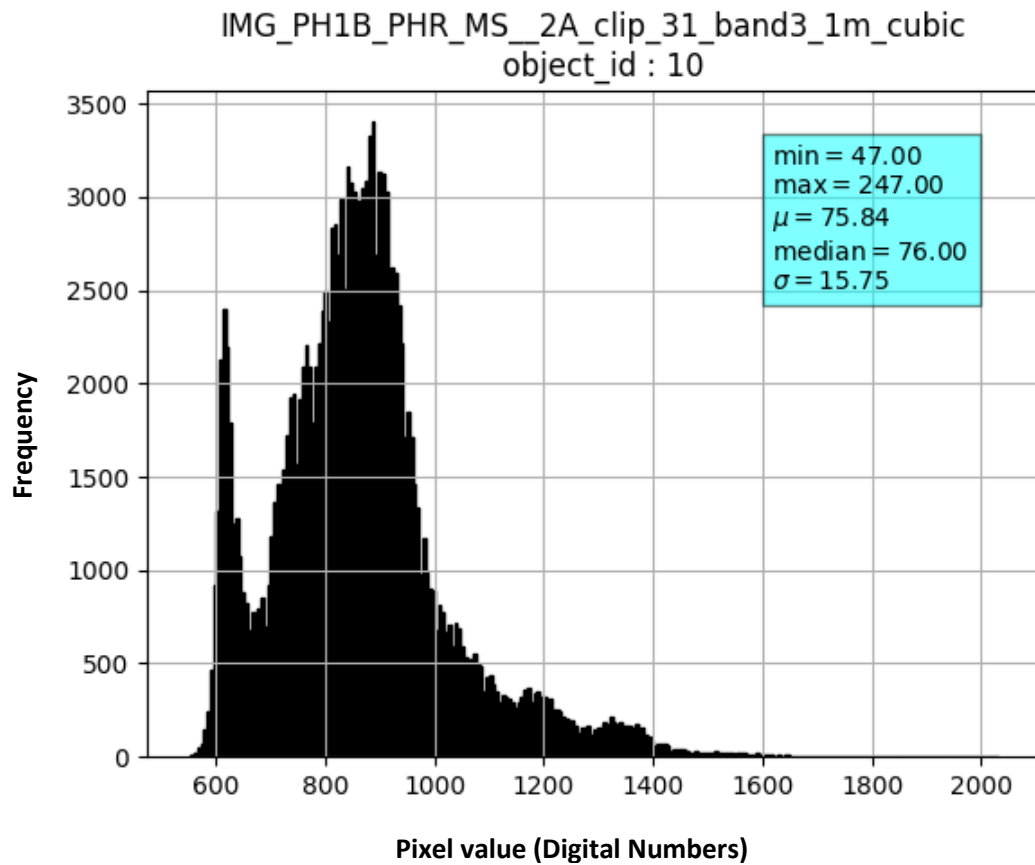
2.5.8.9

IMG_PH1B_PHR_MS_2A_clip_31_band3_1m_cubic
object_id : 9



Id 10

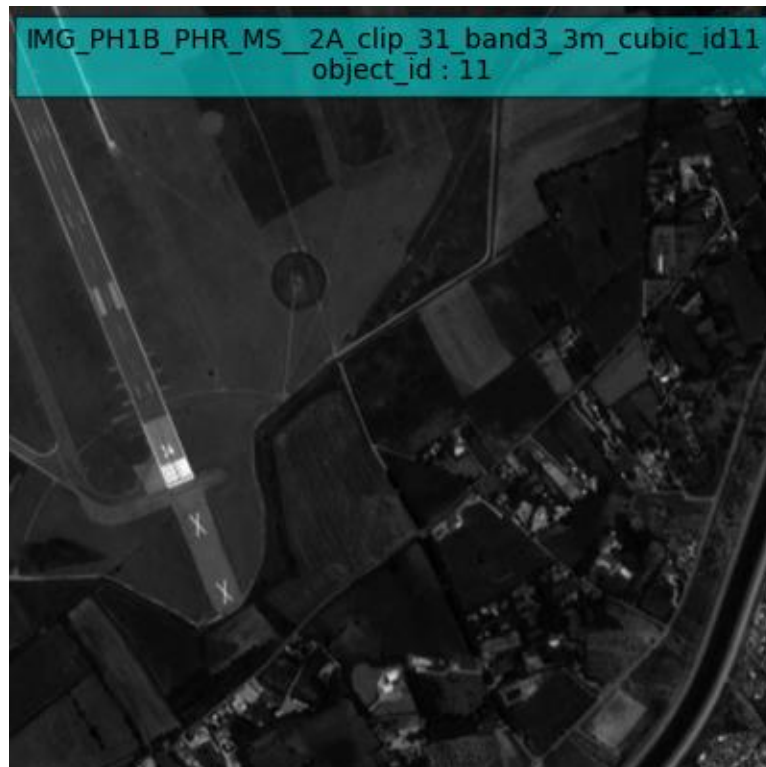
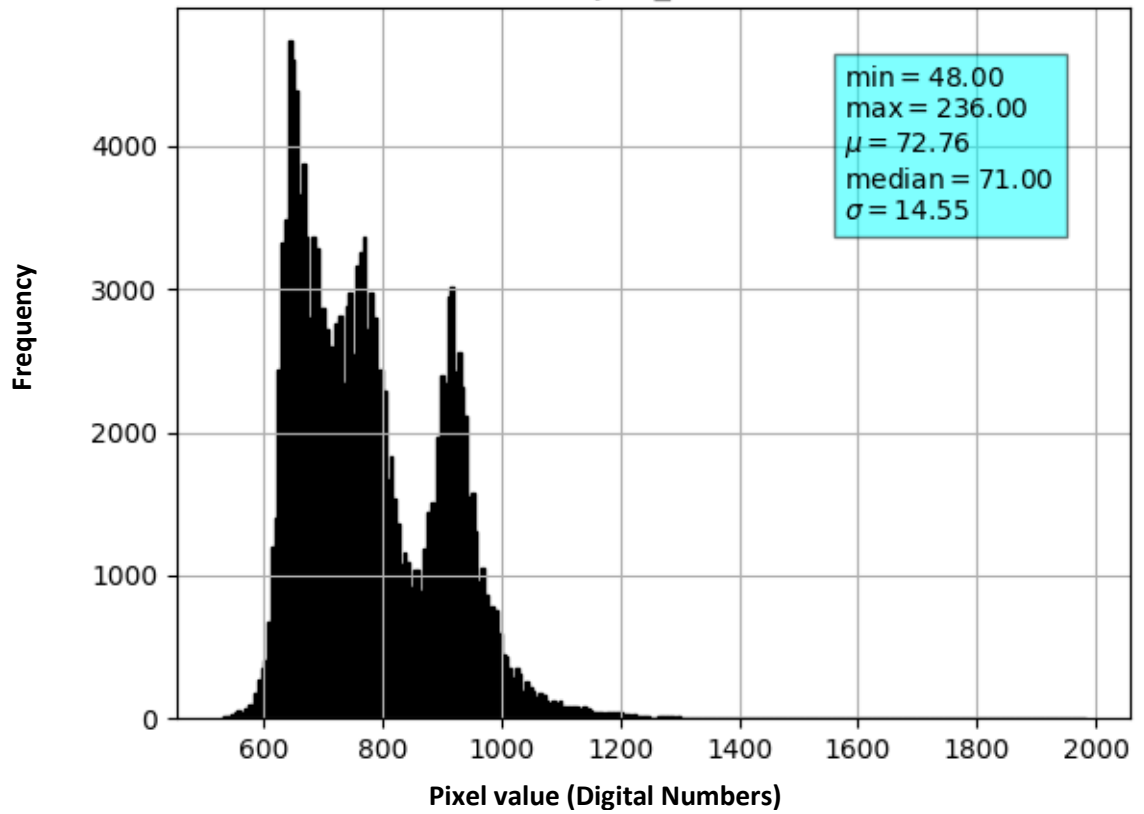
2.5.8.10



Id 11

IMG_PH1B_PHR_MS_2A_clip_31_band3_1m_cubic
object_id : 11

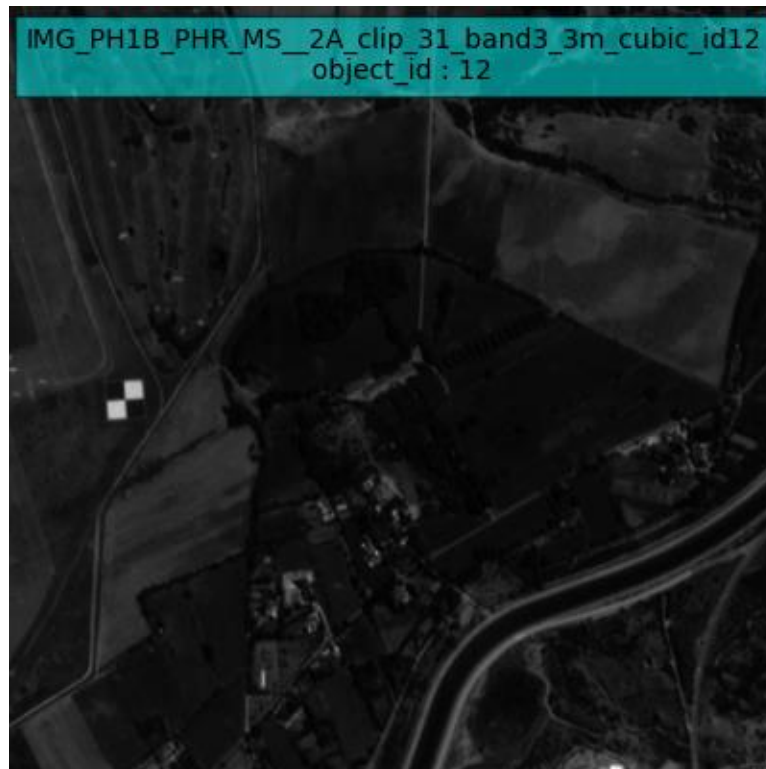
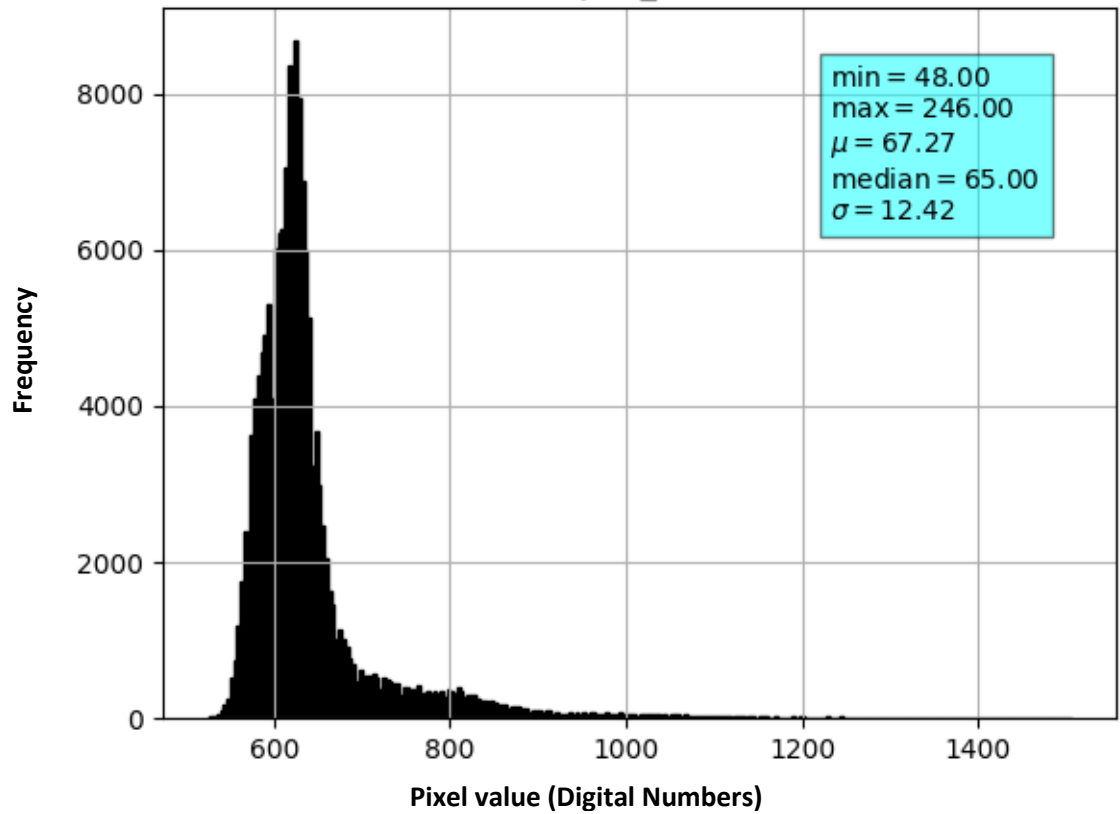
2.5.8.11



Id 12

IMG_PH1B_PHR_MS_2A_clip_31_band3_1m_cubic
object_id : 12

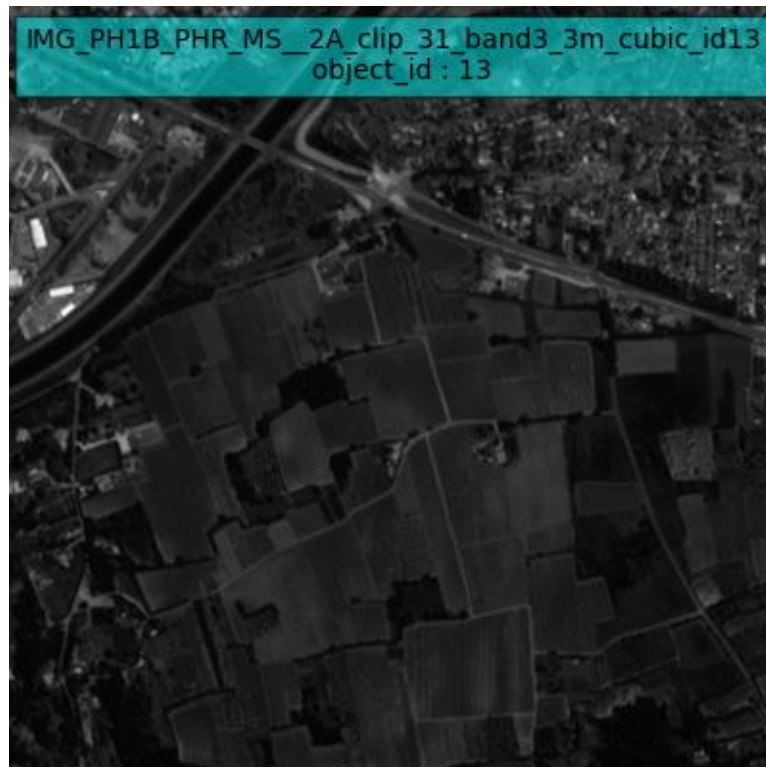
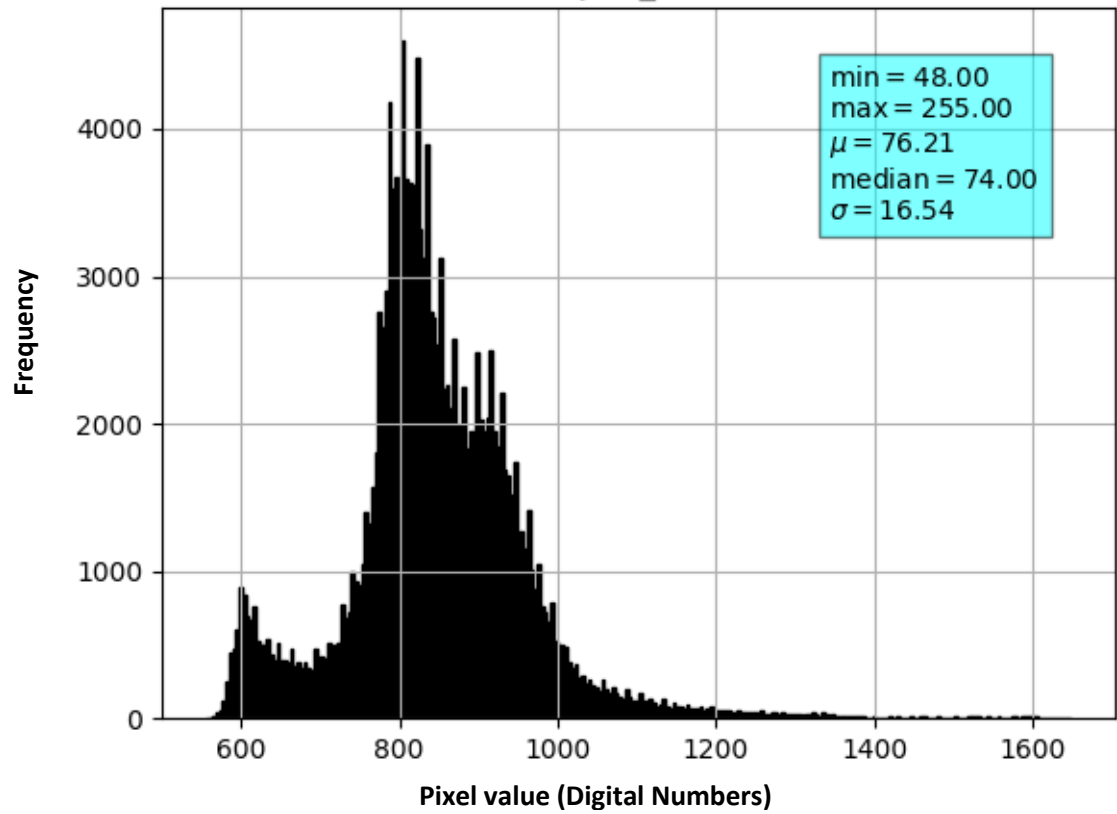
2.5.8.12



Id 13

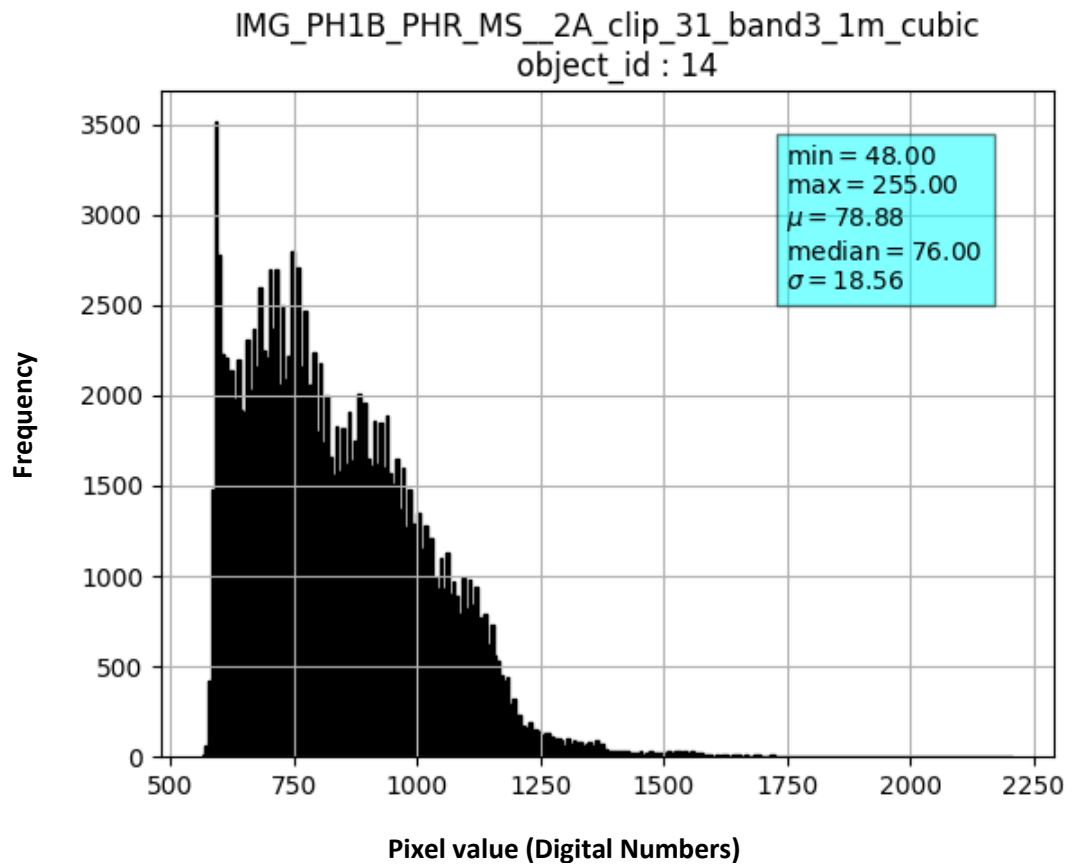
IMG_PH1B_PHR_MS_2A_clip_31_band3_1m_cubic
object_id : 13

2.5.8.13



Id 14

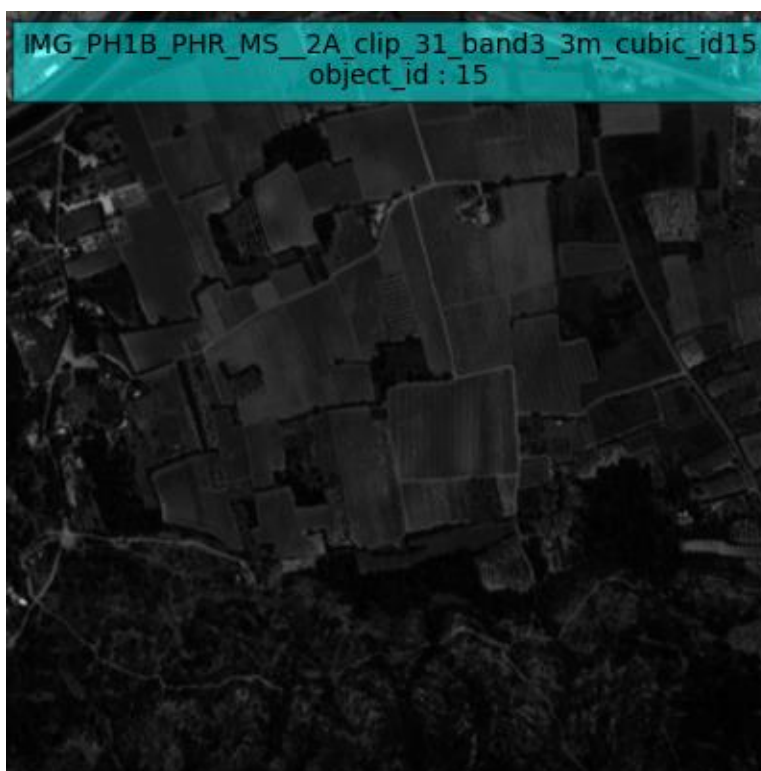
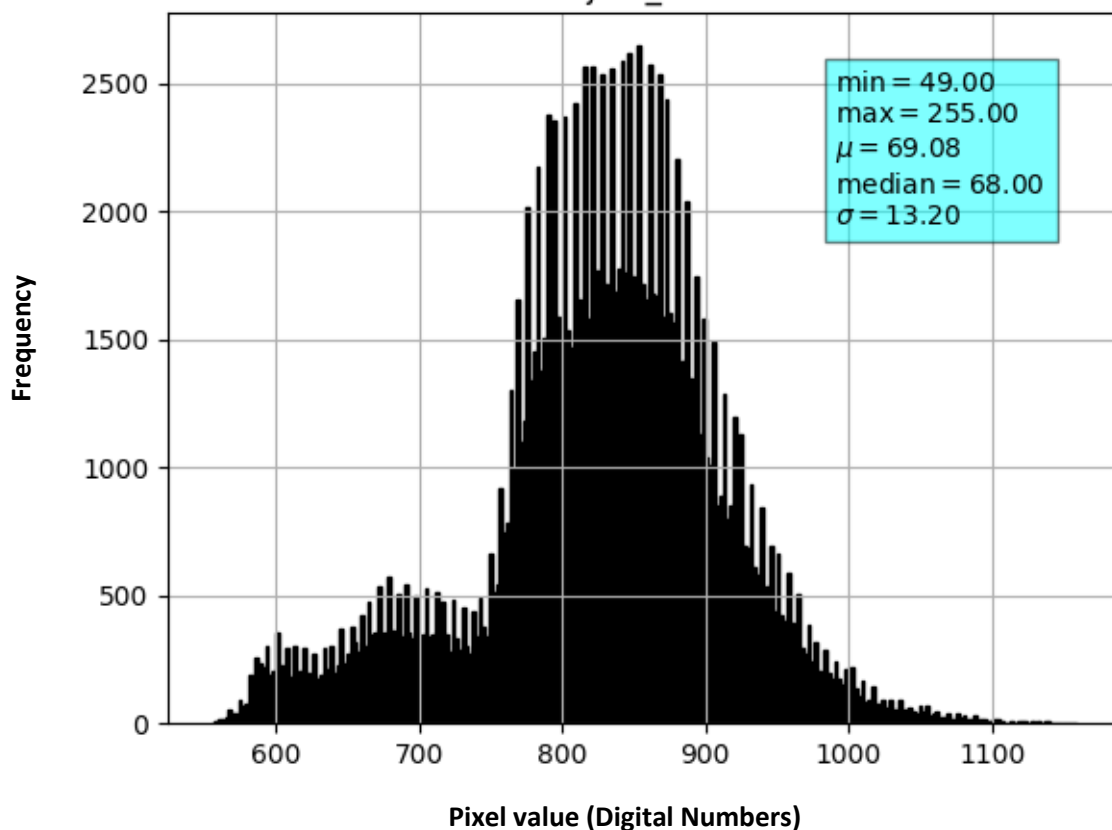
2.5.8.14



Id 15

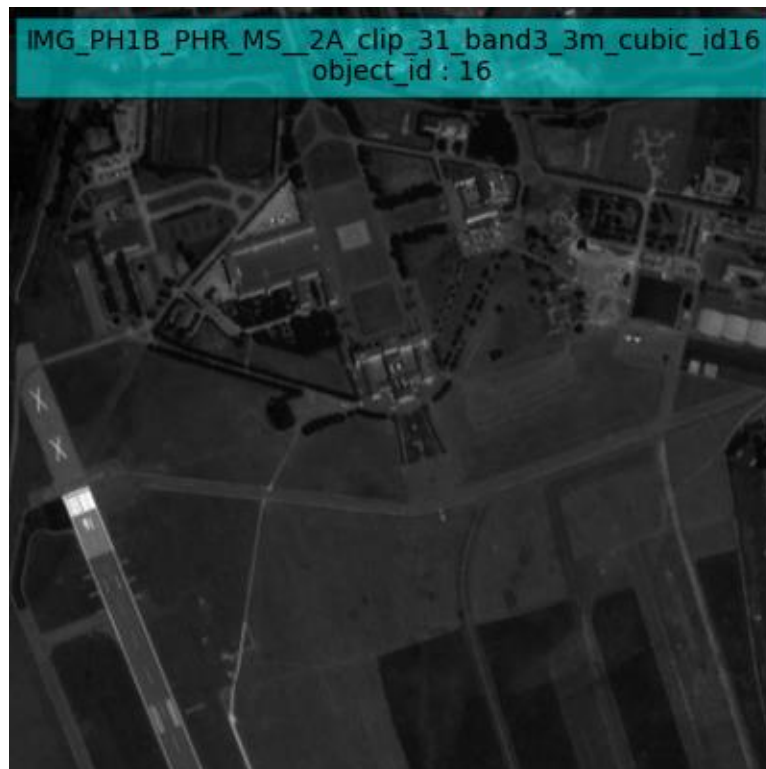
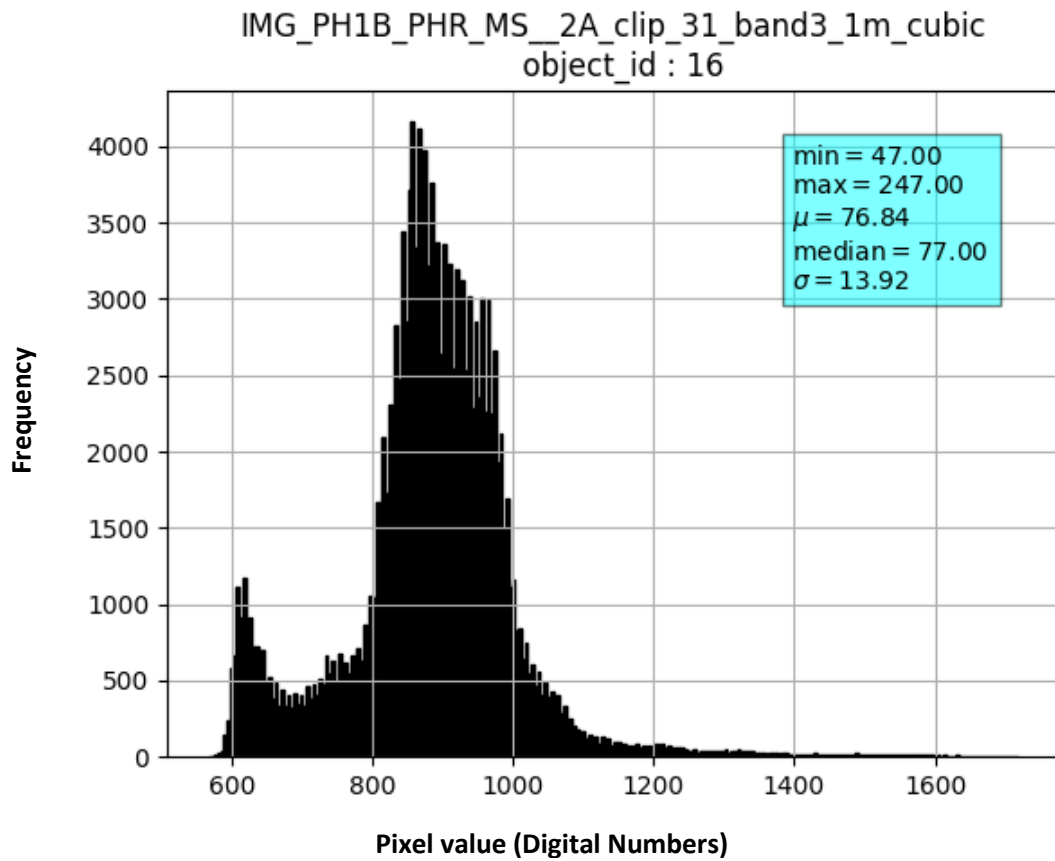
2.5.8.15

IMG_PH1B_PHR_MS_2A_clip_31_band3_1m_cubic
object_id : 15



Id 16

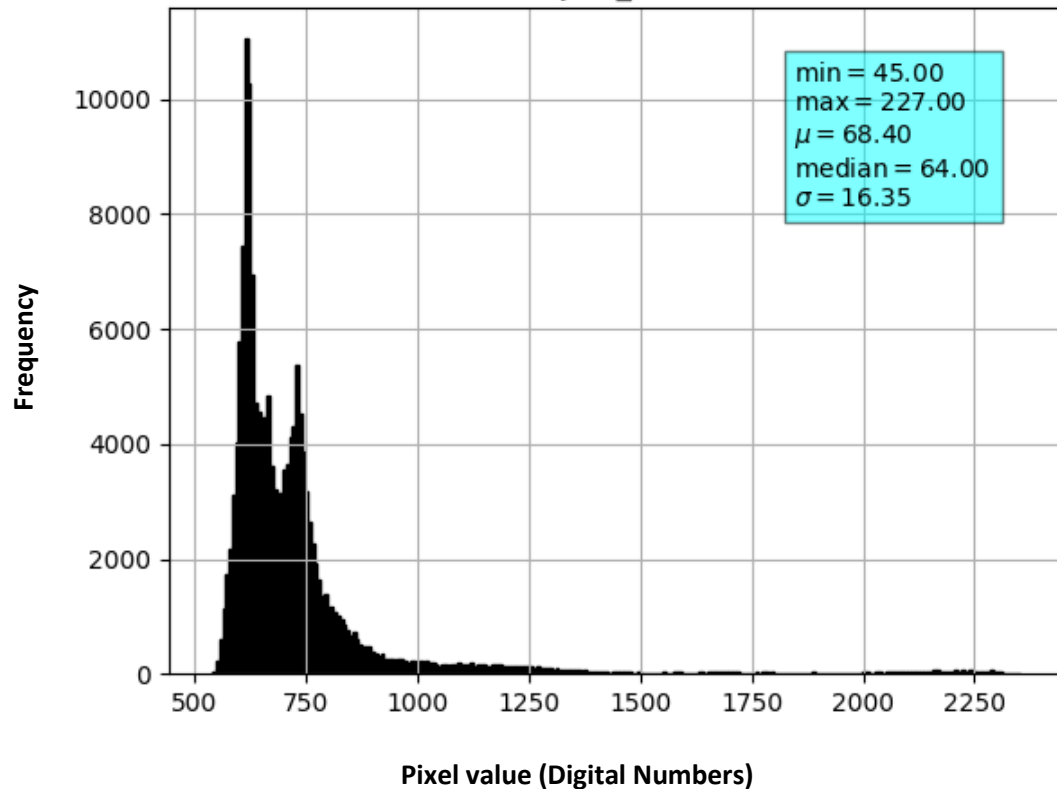
2.5.8.16



Id 17

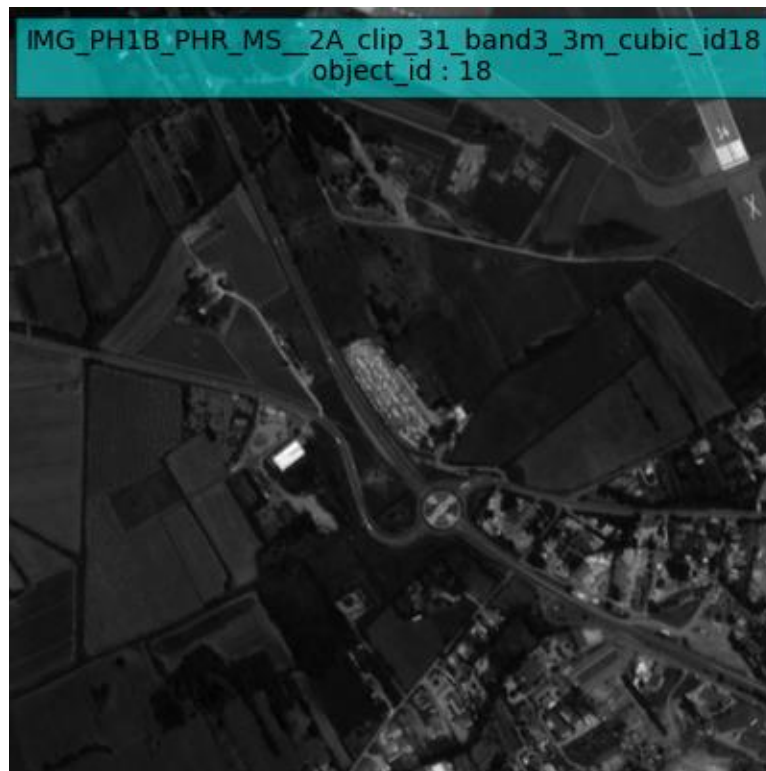
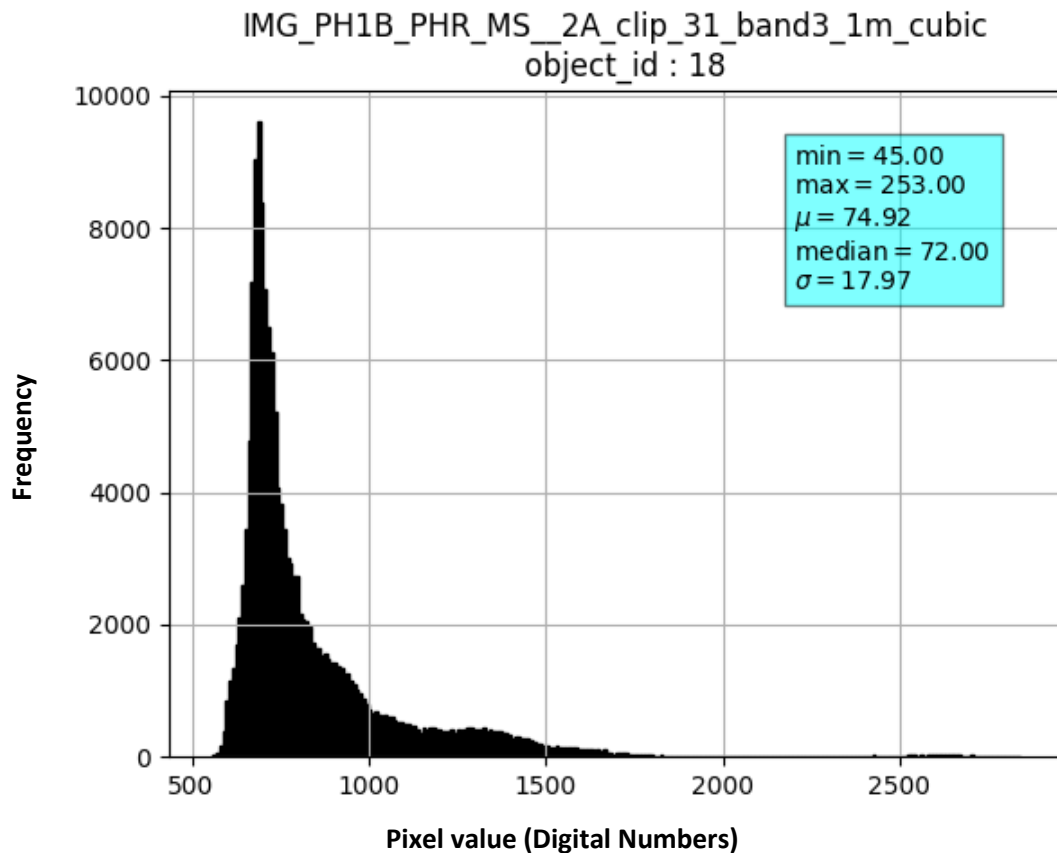
IMG_PH1B_PHR_MS_2A_clip_31_band3_1m_cubic
object_id : 17

2.5.8.17



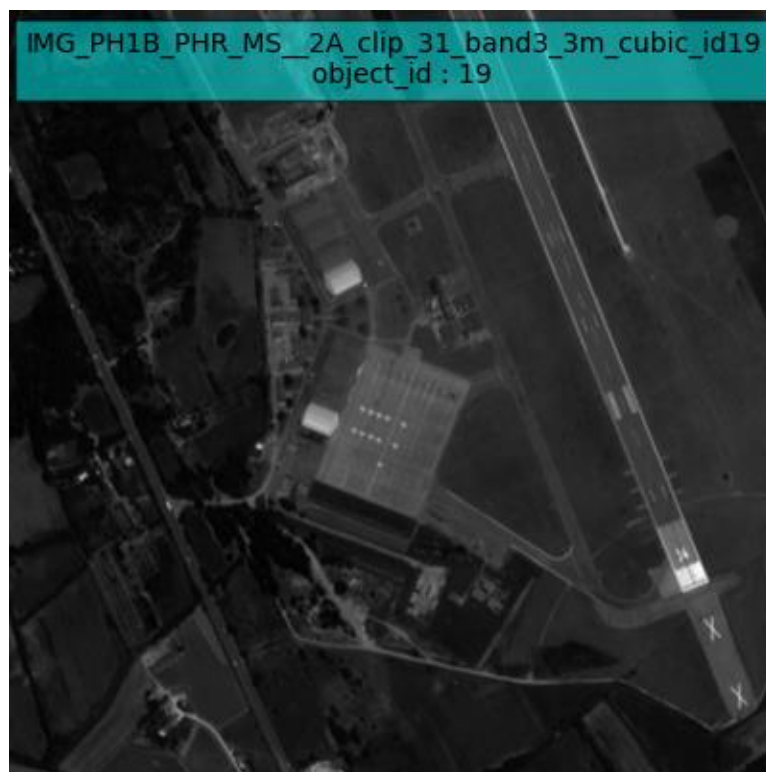
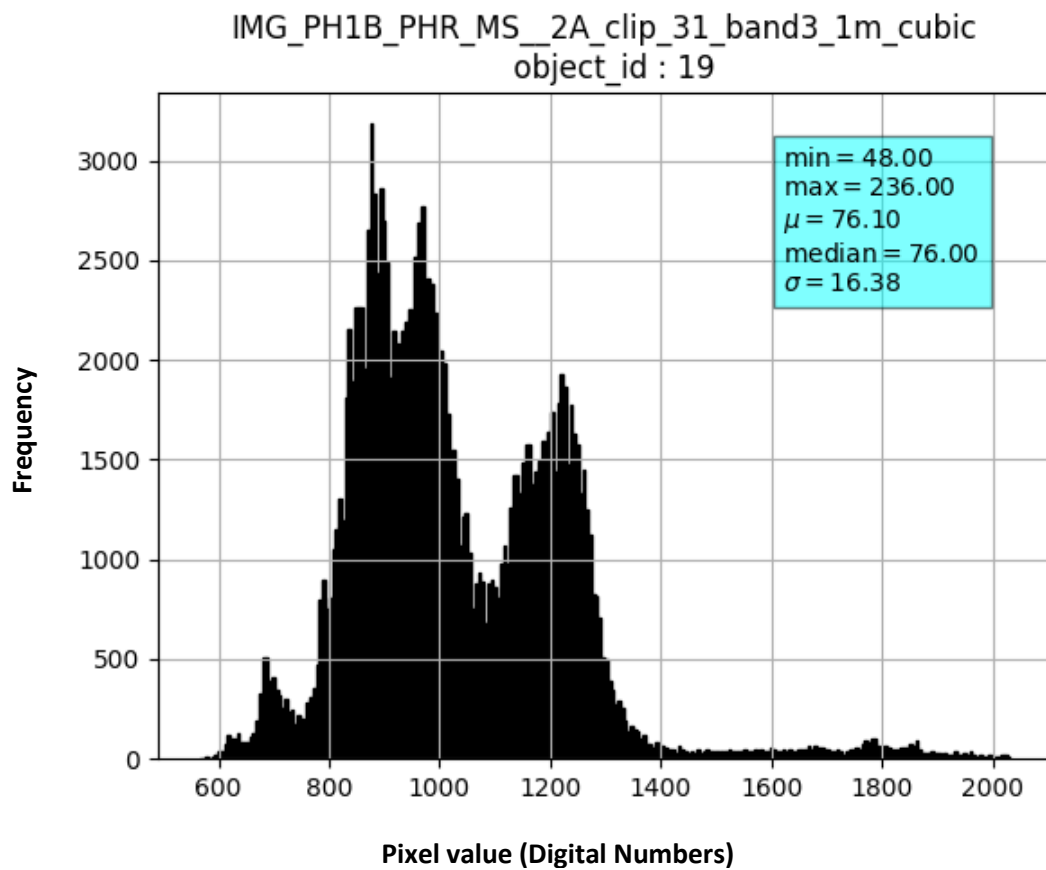
Id 18

2.5.8.18



Id 19

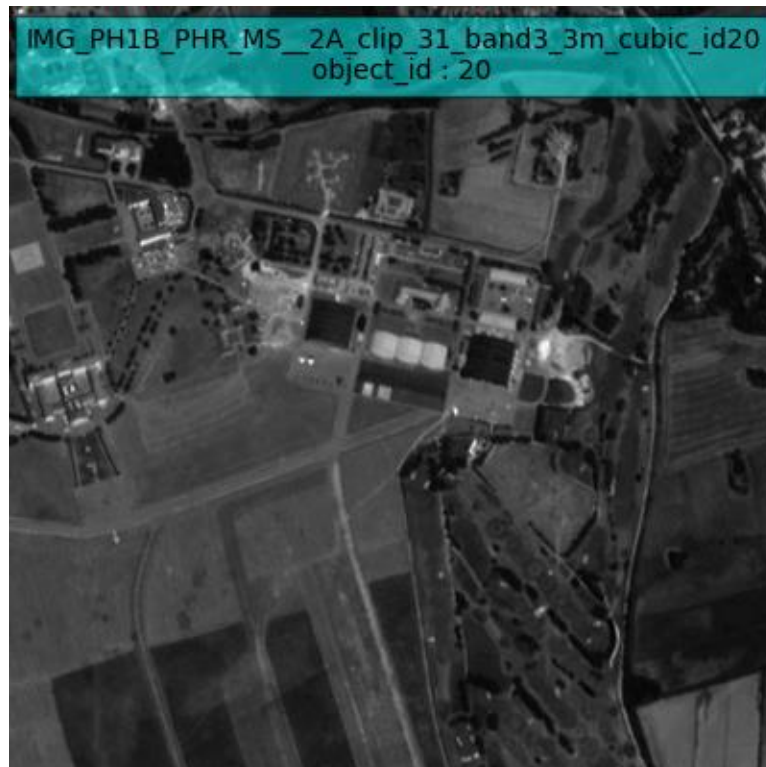
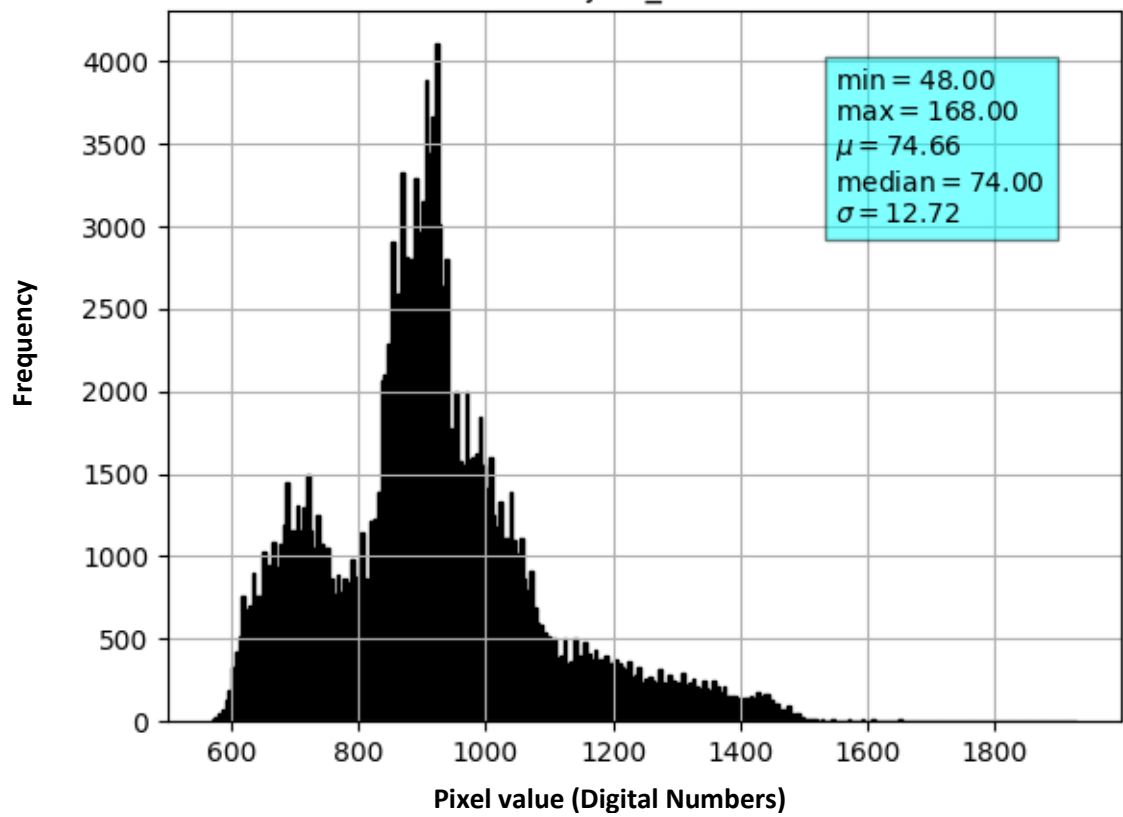
2.5.8.19



Id 20

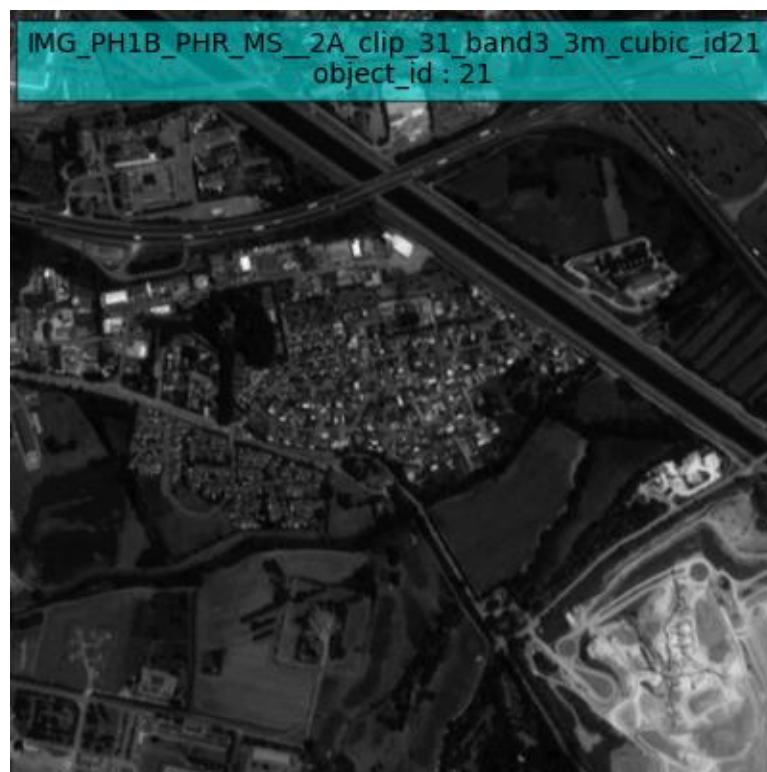
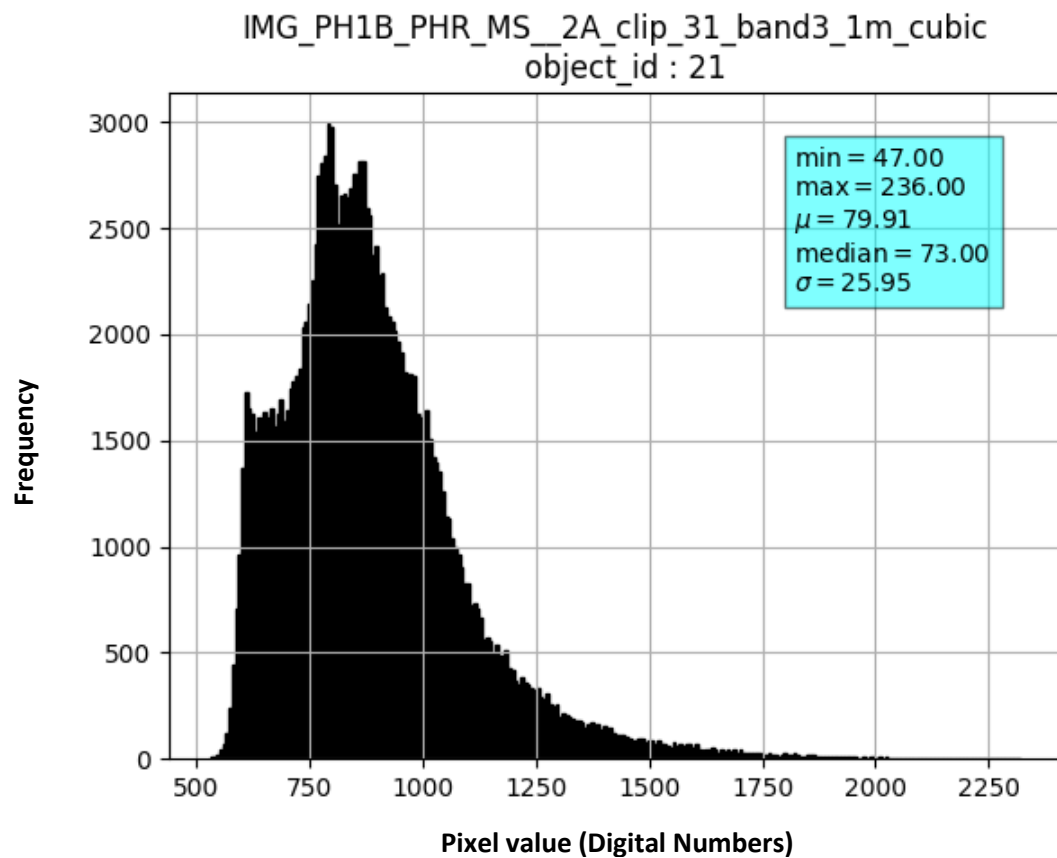
IMG_PH1B_PHR_MS_2A_clip_31_band3_1m_cubic
object_id : 20

2.5.8.20



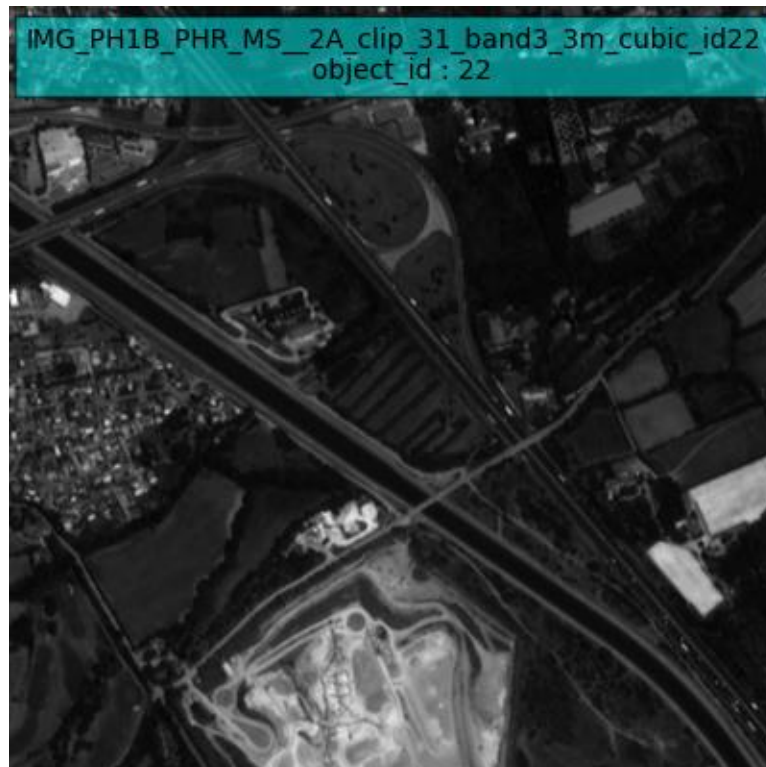
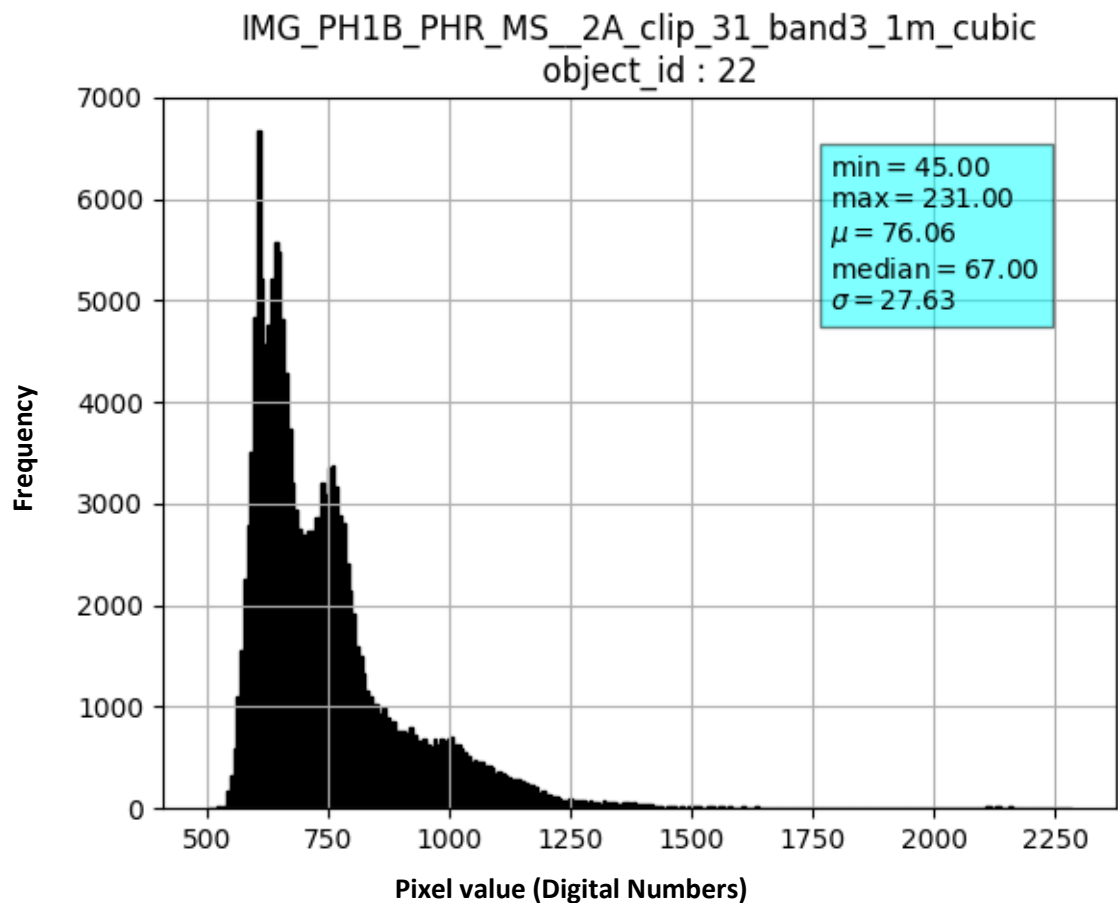
Id 21

2.5.8.21



Id 22

2.5.8.22





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